# ACOUSTIC TEST REPORT, WTG S29 

Version 02
Amherst Island Wind Project
Amherst Island, ON

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January 9, 2019

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## VERSION CONTROL

| Version | Date | Version Description |
| :---: | :---: | :---: |
| 01 | December 14, 2018 | Original Report |
| 02 | January 9, 2019 | Typographical corrections to Tables 7 and 8, and updated |
| tonality analysis. |  |  |

## EXECUTIVE SUMMARY

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete an Acoustic Noise test in accordance with IEC 61400-11 of wind turbine generator WTG S29, part of the Amherst Island Wind Project, located on Amherst Island, Ontario. The measurements were completed on December 6, 2018.

HGC Engineering has assessed the acoustic emissions of Wind Turbine Generator S29, a Siemens SWT-3.2-113 wind turbine, rated at 2772 kW , in accordance with IEC 61400-11:2012 (CAN/CSA-C61400-11:13). A summary of the acoustic results are provided in the following tables:

| Hub Height Wind Speed [m/s] | $\mathbf{7 . 5}$ | $\mathbf{8}$ | $\mathbf{8 . 5}$ | $\mathbf{9}$ | $\mathbf{9 . 5}$ | $\mathbf{1 0}$ | $\mathbf{1 0 . 5}$ | $\mathbf{1 1}^{*}$ | $\mathbf{1 1 . 5}^{*}$ | $\mathbf{1 2}^{*}$ | $\mathbf{1 2 . 5}^{*}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sound Power Level LwA,K in <br> dB(A) | $\mathbf{1 0 2 . 0}$ | $\mathbf{1 0 3 . 6}$ | $\mathbf{1 0 4 . 1}$ | $\mathbf{1 0 4 . 4}$ | $\mathbf{1 0 4 . 3}$ | $\mathbf{1 0 4 . 2}$ | $\mathbf{1 0 3 . 7}$ | $\mathbf{1 0 3 . 7}$ | $\mathbf{1 0 4 . 0}$ | $\mathbf{1 0 3 . 6}$ | $\mathbf{1 0 3 . 6}$ |
| Tonal Audibility, LLak in dB: $^{\text {Pa }}$ | $<-3.0$ | -1.7 | -0.7 | -0.2 | -0.1 | -1.3 | -2.7 | -2.7 | $<-3.0$ | -2.6 | -1 |
| Total Uncertainty uLWA,k in dB: | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 |

* Above allowed range of power curve.

| 10 m Height Wind Speed [ $\mathrm{m} / \mathrm{s}$ ] | 6 | 7* | 8* |
| :---: | :---: | :---: | :---: |
| Sound Power Level $\mathrm{Lwa}_{\text {w }, \mathrm{k}}$ in $\mathrm{dB}(\mathrm{A})$ : | 104.5 | 104.3 | 104 |
| Total Uncertainty $\mathrm{u}_{\mathrm{LW}, \mathrm{k}, \mathrm{k}}$ in dB: | 0.7 | 0.7 | 0.9 |

* Above allowed range of power curve.

NOISE

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## 1 INTRODUCTION

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete sound level measurements (Emission Audit) of Wind Turbine Generator S29 ("WTG S29") in order to determine the sound power level of the turbine. The turbine is part of the Amherst Island Wind Project which includes 26 Siemens wind turbines of various generation capacities, each with a hub height of 99.5 m , with an overall project nameplate capacity of 74.3 MW. Measurements were completed on December 6, 2018. Figure 1 shows the location of the wind turbine generator.

This report summarizes measurements that were completed in accordance with IEC Standard 6140011 "Wind turbine generator systems - Part 11: Acoustic Noise Measurement Techniques". The CAN/CSA-C61400-11:13 standard is an adoption without modification of the identically titled IEC Standard IEC 61400-11:2012 [1].

## 2 WIND TURBINE GENERATOR

The wind turbine generator is manufactured by Siemens and is the SWT-3.2-113 model, rated at 2772 kW with a rotor diameter of 113 m and a hub height of 99.5 m . This turbine is an upwind, pitch controlled, horizontal axis wind turbine with three blades. Specific details of the wind turbine generator are included in Table 1.

Table 1: Wind Turbine Generator Characteristics

| Wind Turbine |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Manufacturer | Siemens |  |  |  |  |
| Model Number | SWT 3.2-113 |  |  |  |  |
| Serial Number | S29 |  |  |  |  |
| Hub Height | 99.5 m |  |  |  |  |
| Tower Type (lattice or tube) | Tubular |  |  |  |  |
| Horizontal Distance from Rotor Centre to Tower Axis | 5.5 m |  |  |  |  |
| Rotor Diameter | 113 m |  |  |  |  |
| Speed (constant or variable) | Variable |  |  |  |  |
|  | $6 \mathrm{~m} / \mathrm{s}$ | $7 \mathrm{~m} / \mathrm{s}$ | $8 \mathrm{~m} / \mathrm{s}$ | $9 \mathrm{~m} / \mathrm{s}$ | $10 \mathrm{~m} / \mathrm{s}$ |
| Pitch Angle | Confidential |  |  |  |  |
| Rotational Speed | Confidential |  |  |  |  |
| Rated Power Output | 2772 kW |  |  |  |  |
| Control Software Version | 133.0.0.6 |  |  |  |  |
| Rotor Details |  |  |  |  |  |
| Rotor Control Devices | Pitch Control |  |  |  |  |
| Presence of Votex Generators, Stall Strips Trailing Edges | Vortex Generators and Dino Tails |  |  |  |  |
| Blade Type | B55 |  |  |  |  |
| Serial Number |  |  | $\begin{aligned} & 5502488 \\ & 5503415 \\ & 5503438 \end{aligned}$ |  |  |
| Gearbox |  |  |  |  |  |
| Manufacturer | N/A - Direct Drive |  |  |  |  |
| Model Number | N/A - Direct Drive |  |  |  |  |
| Serial Number | N/A - Direct Drive |  |  |  |  |
| Generator |  |  |  |  |  |
| Manufacturer | Siemens |  |  |  |  |
| Model Number | DD22_02 |  |  |  |  |
| Serial Number | 5100229927 |  |  |  |  |
| UTM Coordinates |  |  |  |  |  |
| Easting | 359562 |  |  |  |  |
| Northing | 4889909 |  |  |  |  |

The electrical power curve utilized for the sound level measurements is shown in Figure 2. From the supplied power curve, $85 \%$ of maximum electrical power is reached at 2356 kW or at a hub height wind speed of $9.5 \mathrm{~m} / \mathrm{s}$. The required minimum wind speeds for reporting is from 0.8 to 1.3 times the wind speed at $85 \%$ electrical power which is 7.5 to $12.5 \mathrm{~m} / \mathrm{s}$ for this wind turbine.

## 3 TEST ENVIRONMENT

WTG S29 is part of the Amherst Island Wind Project located on Amherst Island, Ontario. Figure 1 shows the specific location of WTG S29. The surrounding land is used mainly for livestock grazing and includes gently rolling terrain. The area surrounding WTG S29 included agriculture fields with short grass. The sound level measurement location was in an area with recently grazed grass.

There are a number of additional wind turbine generators located in the vicinity of the test turbine. WTG S01 is located approximately 530 m to the southwest. Additional turbines are located more than 850 m away. WTG S01, part of the Amherst Island Wind Project, was parked during the testing of WTG S29.

The sound level measurement location was established at 156 m from the base of the turbine. This distance was determined utilizing the reference distance calculation provided in IEC 61400; $\mathrm{R}_{0}=\mathrm{H}+$ $\mathrm{D} / 2 \pm 20 \%$ where H is the hub height and D is the rotor diameter. An $R_{1}$ distance of 192 m was determined for this test using the equation:

$$
R_{1}=\sqrt{\left(D_{1}+D_{2}+D_{3}\right)^{2}+{H_{h u b}}^{2}}
$$

Where $D_{1}$ is the distance from turbine base to the microphone ( 156 m ), $D_{2}$ is the tower radius ( 2.15 m ), $D_{3}$ is the distance from rotor to tower axis ( 5.5 m ) and $H_{h u b}$ is the hub height ( 99.5 m ). Photos of the sound level measurement location, the test turbine, and wind mast location are included under Appendix A.

## 4 INSTRUMENTATION AND SETUP

A Wolfel RoBin measurement system was utilized to complete the IEC measurements. Sound pressure level measurements and recordings were completed utilizing a 01 dB DUO Smart Noise


Monitor. The microphone was mounted on a one metre diameter board with a primary and secondary windscreen. A standard Bruel \& Kjaer 3" wind screen (half) was used on the microphone as well as a secondary Bruel \& Kjaer UA-2133 wind screen. The influence of the secondary windscreen is shown in Table 2. The acoustic influence of the secondary windscreen contributes approximately 0.2 dBA to the overall sound level and the sound levels have been corrected herein.

Table 2: Frequency Dependent Influence for UA-2133 Windscreen

| Frequency [Hz] | SPL Influence [dB] | Frequency [Hz] | SPL Influence [dB] |
| :---: | :---: | :---: | :---: |
| 100 | -0.07 | 1600 | -0.3 |
| 125 | 0.06 | 2000 | -0.03 |
| 160 | 0.01 | 2500 | -0.12 |
| 200 | 0.18 | 3150 | -0.25 |
| 250 | -0.03 | 4000 | -0.73 |
| 315 | -0.25 | 5000 | -0.5 |
| 400 | -0.26 | 6300 | -0.03 |
| 500 | -0.18 | 8000 | -0.99 |
| 630 | 0.04 | 10000 | -0.77 |
| 800 | -0.14 | 12500 | -0.75 |
| 1000 | -0.44 | 16000 | -1.23 |
| 1250 | -0.14 | 20000 | -0.59 |

The RoBin and DUO systems were time synchronized prior to the start of the measurements (within 1 second).

For the measurements, the electrical power, rotor RPM, azimuth and hub height wind speeds were provided by the customer as analogue signals and were directly connected into the RoBin system.

Wind speed and direction at 10 m height were measured utilizing a Vaisala ultrasonic anemometer while a Reinhardt DFT485 sensor was utilized to measure air pressure, temperature and air humidity. Table 3 shows the weather conditions during the measurement periods.

Table 3: Weather Conditions

|  | December 6, 2018 |  |
| :--- | :---: | :---: |
|  | Start of Test | End of Test |
| Air Temperature $\left({ }^{\circ} \mathbf{C}\right)$ | 0 | 2 |
| Air Pressure (hPa) | 1005 | 1003 |
| Relative Humidity [\%] | 85 | 73 |
| Sky Condition | Overcast |  |
| Range of Wind Direction $\left({ }^{\circ}\right)$ | 285 to 300 |  |

The measurement equipment and the relevant calibration information are shown in Table 4.
Table 4: Instrumentation

| Instrumentation | Manufacturer / Model / Serial Number | Calibration Date |
| :--- | :--- | :---: |
| Measurement System | Wolfel / RoBin / ROBIN.00.0003 | NA |
| Sound Level Meter | 01 dB-Metravib / DUO / 12023 | March 2, 2018 |
| Microphone | GRAS / 40CD / 224382 | March 2, 2018 |
| Anemometer | Vaisala / WMT701 / J3920012 | August 21, 2018 |
| Air Pressure / Temperature <br> and Humidity | Reinhardt / DFT485 / 1027951 | August 29, 2018 |
| Acoustic Calibrator | Bruel \& Kjaer / 4231 / 3010241 | March 1, 2018 |
| Primary Wind Screen | Bruel \& Kjaer | NA |
| Secondary Wind Screen and <br> Ground Board | Bruel \& Kjaer / UA 2133 | NA |
| Noisy Software | Wolfel / Noisy Version 2018 | NA |

Correct calibration of the acoustic instrumentation was verified using an acoustic calibrator manufactured by Brüel \& Kjær. Verification of calibration status was carried out at the start and end of the measurement period and when the microphone was disconnected from the sound level meter. Calibration certificates for the test equipment are provided in Appendix B. The same equipment was utilized during the entire test period unless otherwise indicated.

During testing, the anemometer was located 279 m west of the turbine at 10 m above grade.

The standard roughness length applicable for this site is 0.05 given the surrounding farmland with some vegetation.

Sound level measurements were completed with the turbine operational and with the turbine parked. Significant interfering sound from road traffic, aircraft, bird calls, local agricultural activity, etc. was not included in the analyzed data for either the turbine on or off condition. The microphone position was maintained to be within $+/-15^{\circ}$ of the downwind direction through visual inspection and the recording of the azimuth position. Downwind directions ranged between $285^{\circ}$ and $300^{\circ}$.

### 4.1 TYPE B UNCERTAINTIES

The uncertainty components of Type B are provided in Table 5. Additional one-third octave Type B uncertainty components for the instrument and wind screen insertion loss can be provided upon request. These uncertainty components are provided by the instrument manufacturers.

Table 5: Type B Uncertainty Components

| Component | Value |
| :--- | :---: |
| Calibration, $u_{\mathrm{B} 1}$ | 0.2 dB |
| Instrument, $u_{\mathrm{B} 2}$ | $0.2-0.5 \mathrm{~dB}$ |
| Board, $u_{\mathrm{B} 3}$ | 0.3 dB |
| Wind screen insertion loss, $u_{\mathrm{B} 4}$ | $0.1-0.5 \mathrm{~dB}$ |
| Distance and Direction, $u_{B}$ | 0.1 dB |
| Air Absorption, $u_{\mathrm{B} 6}$ | 0.2 dB |
| Weather Conditions, $u_{\mathrm{B} 7}$ | 0.5 dB |
| Wind Speed, Measured, $u_{\mathrm{B} 8}$ | $0.7 \mathrm{~m} / \mathrm{s}$ |
| Wind Speed Derived, $u_{\mathrm{B} 8}$ | $0.3 \mathrm{~m} / \mathrm{s}$ |
| Wind Speed, Power Curve, $u_{\mathrm{B} 9}$ | $0.2 \mathrm{~m} / \mathrm{s}$ |

The uncertainty associated with the electrical power transducer (derived wind speed, $u_{\mathrm{B} 8}$ ) has been increased to $0.3 \mathrm{~m} / \mathrm{s}$ as the electrical power signal was provided by the manufacturer. The manufacturer has indicated a measurement chain uncertainty of $1 \%$ on the measured electrical power, which corresponds to approximately $0.05 \mathrm{~m} / \mathrm{s}$. An increase of $0.1 \mathrm{~m} / \mathrm{s}$, over the typical standard uncertainty, has been included for the derived wind speed uncertainty.


## 5 MEASUREMENTS AND RESULTS

Sound level measurements were conducted of WTG S29 on December 6, 2018, between 9:00 and 15:30. Temperature and other weather characteristics are reported in Table 3 above.

The data points where the turbine was operating at or below the allowed power curve range are identified as the allowed range (intervals on the electrical power curve where no duplicated values exist and the slope of the power curve including the uncertainty is positive). For data within the allowed range of the electrical power curve the wind speed $\left(V_{P, n}\right)$ is determined. The average value of the ratio between the derived wind speed from the electrical power curve and the measured nacelle wind speed $\left(V_{\mathrm{nac}, \mathrm{m}}\right), k_{\mathrm{nac}}$ is determined. $k_{\mathrm{nac}}=\frac{V_{\mathrm{nac}, \mathrm{n}}}{V_{\mathrm{nac}, \mathrm{m}}}$. For this data set the $k_{\mathrm{nac}}$ value of 0.92 was applied to the measured nacelle wind speed to derive the normalized wind speed outside the allowed range.

For background noise measurements, the measured 10 m wind speed $\left(V_{Z, m}\right)$ and the wind speed derived from the power curve $V_{\mathrm{P}, \mathrm{n}}$ are utilized to determine $k_{\mathrm{z}} . k_{\mathrm{Z}}=\frac{V_{\mathrm{P}, \mathrm{n}}}{V_{Z, \mathrm{~m}}}$. For this data set, the $k_{\mathrm{Z}}$ value of 1.36 , was applied to the measured 10 m wind speed $\left(V_{Z, m}\right)$ to derive the normalised wind speed at hub height ( $V_{\mathrm{B}, \mathrm{n}}$ ) during background noise measurements.

Figure 3 shows the sound pressure level at the measurement location versus the hub height wind speed. Blue circles represent sound level data points collected with the turbine operating in the allowed range, above this point the sound levels are shown as black squares. Magenta triangles indicate data points of the background sound level (turbine off).

Figure 4 shows the measured total noise versus electrical power. Figure 5 plots the wind speed determined from the electrical power curve $\left(\mathrm{V}_{\mathrm{p}}\right)$ relative to the measured nacelle wind speed $\left(\mathrm{V}_{\text {nac,m }}\right)$ and 10 m met mast wind speed $\left(\mathrm{V}_{\mathrm{z}, \mathrm{m}}\right)$.

Table 6 summarizes the analysis of the measured results.

Table 6: Sound Level Data

| Hub Height Wind Speed [m/s] | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11* | 11.5* | 12* | 12.5* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Collected Data Points, Total | 48 | 49 | 59 | 71 | 89 | 50 | 73 | 106 | 56 | 36 | 23 |
| Collected Data Points, Background | 13 | 23 | 26 | 55 | 44 | 46 | 52 | 54 | 20 | 23 | 20 |
| Average Wind Speed, $\mathrm{V}_{\mathrm{K}}$ | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 9.9 | 10.5 | 10.9 | 11.5 | 12.0 | 12.5 |
| Total Noise, $\mathrm{Lv}_{\mathrm{v}, \mathrm{T}, \text { in } \mathrm{dB}(\mathrm{A})}$ | 51.8 | 53.3 | 53.8 | 54.0 | 53.9 | 53.9 | 53.4 | 53.4 | 53.7 | 53.3 | 53.4 |
| Background Noise, $\mathrm{Lv}_{\mathrm{V}, \mathrm{B}}$ in dB(A) | 41.5 | 41.9 | 41.7 | 41.7 | 42.2 | 41.6 | 41.9 | 42.1 | 42.4 | 42.6 | 42.1 |
| Difference T-B, dB(A) | 10.3 | 11.4 | 12.0 | 12.2 | 11.7 | 12.2 | 11.5 | 11.3 | 11.3 | 10.8 | 11.3 |
| Corrected $\mathrm{L}_{\text {Aeq, }}$, in $\mathrm{dB}(\mathrm{A})$ | 51.4 | 53.0 | 53.5 | 53.7 | 53.6 | 53.6 | 53.1 | 53.1 | 53.3 | 52.9 | 53.1 |

* Above allowed range of power curve.

Table 6 shows that at least 180 measurements were collected for both total noise and background noise and at least 10 measurements or data points are included in the analysis for each wind speed bin for total noise, as required by IEC 61400-11.

Table 7 shows the calculated sound level data, the resulting sound power levels, tonality and measurement uncertainty at hub height, while Table 8 shows the apparent sound power levels at a reference height of 10 m . Figure 6 presents the apparent sound power level at the integer wind speeds.

Table 7: Apparent Sound Power Level of WTG S29 at Hub Height

| Hub Height Wind Speed [m/s] | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | 10.5 | 11* | 11.5* | 12* | 12.5* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Corrected $\mathrm{L}_{\text {Aeq }}$, in $\mathrm{dB}(\mathrm{A})$ | 51.4 | 53.0 | 53.5 | 53.7 | 53.6 | 53.6 | 53.1 | 53.1 | 53.3 | 52.9 | 53.1 |
| Sound Power Level Lwa,k in dB(A) | 102.0 | 103.6 | 104.1 | 104.4 | 104.3 | 104.2 | 103.7 | 103.7 | 104.0 | 103.6 | 103.6 |
| Tonal Audibility, $\Delta \mathrm{L}_{\mathrm{ak}}$ in dB: | <-3.0 | -1.7 | -0.7 | -0.2 | -0.1 | -1.3 | -2.7 | -2.7 | <-3.0 | -2.6 | -1 |
| Total Uncertainty $\mathrm{u}_{\mathrm{LWA}, \mathrm{k}}$ in dB : | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 |

* Above allowed range of power curve.

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Table 8: Apparent Sound Power Level at 10 m Height

| $\mathbf{1 0} \mathbf{m}$ Height Wind Speed $[\mathrm{m} / \mathbf{s}$ ] | $\mathbf{6}$ | $\mathbf{7 *}^{*}$ | $\mathbf{8}^{*}$ |
| :--- | :---: | :---: | :---: |
| Sound Power Level $\mathrm{L}_{\mathrm{WA}, \mathrm{k}}$ in $\mathrm{dB}(\mathrm{A}):$ | 104.5 | 104.3 | 104.0 |
| Total Uncertainty $\mathrm{u}_{\mathrm{LW}, \mathrm{k}}$ in dB: | 0.7 | 0.7 | 0.9 |

* Above allowed range of power curve.

A table and plot of the sound pressure spectrum in third octaves for each integer wind speed are included under Appendix C.

The tonality assessment indicates no tonal audibility greater than or equal to 0 dB . The average narrowband spectra used in the tonality assessment are included under Appendix D.

## 6 CONCLUSIONS

The measurements and analysis, performed in accordance with the methods prescribed in IEC Standard 61400-11:2012 indicate that the sound power level of WTG S29, rated at 2772 kW and part of the Amherst Island Wind Project, has the following sound power levels:

Table 9: Sound Power Level Summary

| Hub Height Wind Speed [m/s] | 7.5 | $\mathbf{8}$ | $\mathbf{8 . 5}$ | $\mathbf{9}$ | $\mathbf{9 . 5}$ | $\mathbf{1 0}$ | $\mathbf{1 0 . 5}$ | $\mathbf{1 1 *}$ | $\mathbf{1 1 . 5}$ | $\mathbf{1 2}^{*}$ | $\mathbf{1 2 . 5}^{*}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sound Power Level LwA,K in <br> dB(A) | $\mathbf{1 0 2 . 0}$ | $\mathbf{1 0 3 . 6}$ | $\mathbf{1 0 4 . 1}$ | $\mathbf{1 0 4 . 4}$ | $\mathbf{1 0 4 . 3}$ | $\mathbf{1 0 4 . 2}$ | $\mathbf{1 0 3 . 7}$ | $\mathbf{1 0 3 . 7}$ | $\mathbf{1 0 4 . 0}$ | $\mathbf{1 0 3 . 6}$ | $\mathbf{1 0 3 . 6}$ |
| Tonal Audibility, $\Delta L_{\text {ak }}$ in dB: | $<-3.0$ | -1.7 | -0.7 | -0.2 | -0.1 | -1.3 | -2.7 | -2.7 | $<-3.0$ | -2.6 | -1 |
| Total Uncertainty uLwA,k in dB: | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 |

* Above allowed range of power curve.

The sound levels presented above are relevant for Siemens SWT-3.2-113 turbine WTG S29 given the environmental conditions and the operating parameters of the turbine during the testing periods.

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## REFERENCES

1. International Electrotechnical Commission, 61400-11:2012 Wind turbine generator systems Part 11: Acoustic noise measurement techniques.
2. Google Maps Aerial Imagery, Internet Application: maps.google.com


Figure 1 - Location of Test Turbine S29

Figure 2: Reference Electrical Power Curve
WTG S29, 2772 kW, Amherst Island Wind Project, Ontario


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Figure 3: Acoustic Noise Measurements of the Wind Turbine Generator


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Figure 4: Total Sound Level [dBA] vs. Electrical Power [kW] WTG S29, 2772 kW, Amherst Island Wind Project, Ontario


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Figure 5: Measured Wind Speed (Nacelle and 10 m ) vs. Derived Wind Speed


Figure 6: Apparent Sound Power Level vs. Wind Speed WTG S29, 2772 kW, Amherst Island Wind Project, Ontario


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## APPENDIX A:

## LOCATION PHOTOS

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Meteorological Tower Location - December 6, 2018


Sound Level Measurement Location - December 6, 2018


Sound Level Microphone on Board - December 6, 2018


Photos of Sound Level Meter and Meteorological Tower Taken from the Base of WTG S29

- December 6, 2018


## APPENDIX B:

 CALIBRATION CERTIFICATES"
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ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1 ACCREDITED by NVLAP (an ILAC MRA signatory)


## Calibration Certificate No. 40217 n 6

Instrument:<br>Model:<br>Manufacturer:<br>Serial number:<br>Class (IEC 60942):<br>Barometer type:<br>Barometer $s / n$ :<br>Customer:<br>Tel/Fax:<br>Acoustical Calibrator<br>4231<br>Brüel and Kjær<br>3010241<br>1<br>HGC Engineering<br>905-826-4044 /

Date Calibrated: 3/1/2018 Cal Due:

| Status: | Received | Sent |
| :--- | :---: | :---: |
| In tolerance: | X | X |
| Out of tolerance: |  |  |
| See comments: |  |  |

Contains non-accredited tests: __Yes X No

Address: 2000 Argentia Road, Plaza One<br>Suite 203<br>Mississauga, Ontario, Canada L5N 1P7

Tested in accordance with the following procedures and standards:
Calibration of Acoustical Calibrators, Scantek Inc., Rev. 10/1/2010

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

| Instrument - Manufacturer | Description | 5/N | Cal. Date | Traceability evidence | Cal. Due |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cal. Lab / Accreditatlon |  |
| 4838-Norsonic | SME Cal Unit | 31061 | Jul 28, 2017 | Scantek, Inc./ NVLAP | Jul 28, 2018 |
| DS-360-SRS | Function Generator | 88077 | Sep 15, 2016 | ACR Env. / A2LA | Sep 15, 2018 |
| 34401A-Agilent Technologies | Digital Voltmeter | MY47011118 | Sep 20, 2017 | ACR Env. / A2LA | Sep 20, 2018 |
| HM30-Thommen | Meteo Station | 1040170/39633 | Oct 25, 2017 | ACR Env./ A2LA | Oct 25, 2018 |
| 140-Norsonic | Real Time Analyzer | 1403978 | Mar 22, 2017 | Scantek, Inc. / NVLAP | Mar 22, 2018 |
| PC Program 1018 Norsonic | Calibration software | v.6.1T | Validated Nov 2014 | Scantek, Inc. | - |
| 4192-Brüel\&Kjær | Microphone | 2854675 | Nov 11, 2017 | Scantek, Inc. / NVLAP | Nov 11, 2018 |
| 1203-Norsonic | Preamplifier | 92268 | Oct 18, 2017 | Scantek, Inc./ NVLAP | Oct 18, 2018 |

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK)

| Calibrated by: | Jeremy | Authorized signatory: | Steven E. Marshal |
| :---: | :---: | :---: | :---: |
| Signature | musfardx | Signature | Ltame El |
| Date | (1)31/18 | Date | $3 / 3 / 2018$ |
|  |  |  | 3/ |

[^0]
## Scantelh, Inc.

CALIBRATION LABORATORY
ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1 ACCREDITED by NVLAP (an ILAC MRA signatory)

## Calibration Certificate No. 40222

| Instrument: | Microphone |
| :--- | :--- |
| Model: | 40CD |
| Manufacturer: | GRAS |
| Serial number: | 224382 |
| Composed of: |  |
|  |  |
| Customer: | HGC Engineering |
| Tel/Fax: | 905-826-4044/ |

Date Calibrated: 3/2/2018 Cal Due: 6/ lar 2018 Status:
In tolerance:
Out of tolerance:
See comments:
Contains non-accredited tests: __Yes X No
Address:
2000 Argentia Road, Plaza One Suite 203
Mississauga, Ontario, Canada L5N 1P7

## Tested in accordance with the following procedures and standards:

Calibration of Measurement Microphones, Scantek, Inc., Rev. 2/25/2015
Instrumentation used for calibration: N-1504 Norsonic Test System:

| Instrument - Manufacturer | Description | S/N | Cal. Date | Traceability evidence | Cal. Due |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 483B-Norsonlc | SME Cal Unit | 31061 | Jul 28, 2017 | Scantek, Inc./ NVLAP | Jul 28, 2018 |
| DS-360-SRS | Function Generator | 88077 | Sep 15, 2016 | ACR Env./A2LA | Sep 15, 2018 |
| 34401A-Agilent Technologies | Digital Voltmeter | MY47011118 | Sep 20, 2017 | ACR Env./A2LA | Sep 20, 2018 |
| HM30-Thommen | Meteo Station | $1040170 / 39633$ | Oct 25, 2017 | ACR Env./A2LA | Oct 25, 2018 |
| PC Program 1017 Norsonic | Calibration software | v.6.1T | Validated | Scantek, Inc. |  |
| 1253-Norsonic |  | Nov 2014 | - |  |  |
| 1203-Norsonic | Calibrator | 28326 | Nov 10,2017 | Scantek, Inc./ NVLAP | Nov 10, 2018 |
| 4180-Brüel\&Kjær | Preamplifier | 92268 | Oct 18,2017 | Scantek, Inc./ NVLAP | Oct 18, 2018 |

Instrumentation and test results are traceable to SI - BIPM through standards maintained by NPL (UK) and NIST (USA)

| Calibrated by: | Jaremy Gptwalt | Authorized signatory: | Steven E Marshall |
| :---: | :---: | :---: | :---: |
| Signature |  | Signature | * toune Manshall |
| Date | (1) $3 / 2 / 18$ | Date | $3 / 3 / 2018$ |

[^1]
## Scanteh, Inc. <br> CALIBRATION LABORATORY

 ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1ACCREDITED by NVLAP (an ILAC MRA signatory)

# Calibration Certificate No. 40221 



Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM \& Dosimeters - Acoustical Tests, Scantek Inc., Rev. 7/6/2011
Instrumentation used for calibration: Nor-1504 Norsonic Test System:

| Instrument - Manufacturer | Description | S/N | Cal. Date | Traceability evidence | Cal. Due |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cal. Lab / Accreditation |  |
| 483B-Norsonic | SME Cal Unit | 31061 | Jul 28, 2017 | Scantek, Inc./ NVLAP | Jul 28, 2018 |
| DS-360-SRS | Function Generator | 88077 | Sep 15, 2016 | ACR Env./ A2LA | Sep 15, 2018 |
| 34401A-Agilent Technologies | Digital Voltmeter | MY47011118 | Sep 20, 2017 | ACR Env./ A2LA | Sep 20, 2018 |
| HM30-Thommen | Meteo Station | 1040170/39633 | Oct 25, 2017 | ACR Env./ A2LA | Oct 25, 2018 |
| PC Program 1019 Norsonic | Calibration software | v.6.1T | Validated Nov 2014 | Scantek, Inc. | - |
| 1251-Norsonic | Calibrator | 30878 | Nov 10, 2017 | Scantek, Inc./ NVLAP | Nov 10, 2018 |

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

| Temperature $\left({ }^{\circ} \mathrm{C}\right)$ | Barometric pressure (kPa) | Relative Humidity (\%) |
| :---: | :---: | :---: |
| 22.8 | 98.91 | 40.0 |


| Calibrated by: | Jeremy Gotwalt | Authorized signatory: | Steven E. Marshall |
| :---: | :---: | :---: | :---: |
| Signature |  | Signature | Hewen, EMarshall |
| Date | OV $3 / 2 / 18$ | Date | 3/3/2018 |

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory.
This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.
Document stored Z:\Calibration Lab\SLM 2018\01dBDuo_12023_M1.doc

## REINHARDT System- und Messelectronic GmbH

| Typ/Gegenstand <br> Type/Object | DFT-485 |
| :--- | :--- |
| Hersteller <br> Manufacturer | REINHARDT System- und Messelectronic GmbH |
| Seriennummer <br> Serial Number | 1027951 |
| Inventarnummer <br> Inventory Number | --- |
| Auftraggeber <br> Customer | HGC Engineering <br> 2000 Argentia Road, Plaza 1, Suite 203 <br> Mississauga, ON L5N 1P7 - CANADA |
|  |  |

25 Sopt 2017
Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).
Sie wurde in Übereinstimmung mit den Normen DIN EN ISO 9000ff und DIN ISO 10012 durchgeführt.
Fürdie Einhaltungeiner angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certficate documents the traceability to national standards which realize the units of measurement according to the International System of Units (SI).
The calibration is performed according to the standards DINENISO9000ff and DIN ISO 10012.
The user is obliged to have the object recalibrated at appropriate intervals.

Kalibrierdatum
Date of Calibration
Prüfer
person in charge

Unterschrift
Nächste Kalibrierung in 24 Monaten
Recalibration in months

Messeinrichtungen
measuring equipment


# REINHARDT 

## System- und Messelectronic GmbH

## Kalibrierprotokoll / Calibration Protocol Sensoren und Wetterstationen / Sensors and Weather Stations

25 crep 2017

Sensor/Wetterstation
Sensor/Weather Station

Seriennummer
Serial Number
Abgleichnummer Calibration Number
Firmware-Version
Firmware Version

DFT-485
1027951

025
1.40

Seriennummer Platine/n
Serial Number (Board/s)
Datum 29/08/2017
Date
Prüfer
Calibrated by

V1.7

Harald Stiegelmayer


REINHARDT System- und Messelectronic GmbH Bergstr. 3386911 Diessen-Obermühlhausen
Tel. 08196934100 Fax $7005+1414$ E-Mail: info@reinhardt-testsystem.de www.reinhardt-testsystem.de SOH Wind Engineering LLC

141 Leroy Road • Williston, VT 05495 • USA
Tel 802.316.4368 • Fax 802.735.9106 • www.sohwind.com

## CERTIFICATE FOR CALIBRATION OF SONIC ANEMOMETER

Certificate number: 17.US1.07294
Type: Vaisala WMT700 with ROBIN Transmitter
Manufacturer: Vaisala, Oyj, Pl 26, FIN-00421 Helsinki, Finland
Client: HGC Engineering, 2000 Argentia Road, Plaza One, Suite 203, Mississauga, ON L5N 1P7, Canada

Anemometer received: August 21, 2017
Calibrated by: EJF
Certificate prepared by: EJF

Date of issue: August 21, 2017
Serial number: J3920012

Anemometer calibrated: August 21, 2017
Procedure: MEASNET, IEC 61400-12-1:2017 Annex F
Approved by: Calibration engineer, EJF
Calibration equation obtained: $\nu[\mathrm{m} / \mathrm{s}]=1.01170 \cdot \mathrm{f}[\mathrm{m} / \mathrm{s}]+0.00386$
Standard uncertainty, slope: 0.00185
Standard uncertainty, offset: 5.16622
Eic affele
Covariance: - $0.0000350(\mathrm{~m} / \mathrm{s})^{2} / \mathrm{m} / \mathrm{s}$

Absolute maximum deviation: $0.047 \mathrm{~m} / \mathrm{s}$ at $9.126 \mathrm{~m} / \mathrm{s}$
Barometric pressure: $1006.9 \mathrm{hPa} \quad$ Relative humidity: 54.7\% Avg. Direction Output: 179.4

| Succession | Velocity | Temperature in |  | Wind velocity, $\nu$. [m/s] | Anemometer Output, f. [m/s] | Deviation, d. [m/s] | Uncertainty$\begin{gathered} \mathrm{u}_{\mathrm{c}}(\mathrm{k}=2) \\ {[\mathrm{m} / \mathrm{s}]} \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | pressure, $q$. [Pa] | wind tunnel $\left[{ }^{\circ} \mathrm{C}\right]$ | d.p. box $\left[{ }^{\circ} \mathrm{C}\right]$ |  |  |  |  |
| 2 | 9.49 | 25.6 | 28.0 | 4.033 | 4.0170 | -0.034 | 0.024 |
| 4 | 14.82 | 25.7 | 28.0 | 5.042 | 5.0059 | -0.026 | 0.025 |
| 6 | 21.48 | 25.7 | 28.0 | 6.070 | 5.9940 | 0.002 | 0.027 |
| 8 | 29.26 | 25.8 | 28.0 | 7.085 | 6.9913 | 0.008 | 0.030 |
| 10 | 38.27 | 25.8 | 28.0 | 8.103 | 7.9860 | 0.020 | 0.033 |
| 12 | 48.54 | 25.8 | 28.0 | 9.126 | 8.9707 | 0.047 | 0.036 |
| 13-last | 59.87 | 25.8 | 28.0 | 10.136 | 9.9990 | 0.016 | 0.039 |
| 11 | 72.17 | 25.8 | 28.0 | 11.129 | 10.9840 | 0.012 | 0.042 |
| 9 | 86.19 | 25.8 | 28.0 | 12.162 | 12.0010 | 0.016 | 0.045 |
| 7 | 100.79 | 25.7 | 28.0 | 13.151 | 13.0287 | -0.034 | 0.048 |
| 5 | 117.04 | 25.7 | 28.0 | 14.172 | 14.0067 | -0.003 | 0.051 |
| 3 | 134.00 | 25.7 | 28.0 | 15.163 | 14.9827 | 0.001 | 0.054 |
| 1-first | 152.26 | 25.6 | 28.0 | 16.162 | 15.9963 | -0.026 | 0.057 |





Page 1 of 2

## APPENDIX C: OCTAVE BAND SOUND LEVEL RESULTS

"
NOISE

Bin 7.5: 1/3 Spectra Sound Power in dB(A)


Third Octave Frequency [Hz]

| Bin 7.5: 1/3 Spectra Sound Power in dB(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 58.9 | 63.7 | 68.0 | 71.9 | 75.6 | 84.4 | 80.9 | 82.4 | 86.9 | 87.1 | 86.2 | 89.6 | 89.3 | 88.8 |
| $\mathrm{U}_{\mathrm{C}}$ | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 1.6 | 1.6 | 0.8 | 0.8 | 0.9 | 0.8 | 0.9 | 0.9 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 89.2 | 91.8 | 92.2 | 91.4 | 91.1 | 90.3 | 90.7 | 92.3 | 86.7 | 82.5 | 77.7 | 70.7 | 62.1 | [55] |
| $U_{C}$ | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 1.0 | 1.3 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

Bin 8: $1 / 3$ Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$


Third Octave Frequency [Hz]

| Bin 8: 1/3 Spectra Sound Power in dB(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.2 | 65.3 | 69.6 | 73.4 | 77.1 | 84.3 | 86.4 | 85.3 | 88.8 | 90.6 | 87.3 | 90.5 | 90.4 | 90.3 |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 1.0 | 1.1 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 90.8 | 93.4 | 93.9 | 93.3 | 92.8 | 92.1 | 90.8 | 93.7 | 89.2 | 83.6 | 78.9 | 71.8 | 63.3 | [55.4] |
| $U_{C}$ | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.1 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

Bin 8.5: 1/3 Spectra Sound Power in dB(A)


| Bin 8.5: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.5 | 65.9 | 69.9 | 73.8 | 77.4 | 84.1 | 87.5 | 85.8 | 88.7 | 92.0 | 88.0 | 91.0 | 90.9 | 90.9 |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 1.0 | 0.8 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 91.3 | 93.9 | 94.3 | 93.8 | 93.2 | 92.7 | 91.0 | 93.9 | 90.1 | 84.1 | 79.4 | 72.6 | 63.9 | [55.5] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.1 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

NOISE

Bin 9: $1 / 3$ Spectra Sound Power in dB(A)


Third Octave Frequency [Hz]

| Bin 9: 1/3 Spectra Sound Power in dB(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 61.2 | 66.8 | 70.4 | 74.3 | 78.0 | 84.6 | 88.5 | 85.5 | 89.2 | 92.8 | 88.9 | 91.7 | 91.4 | 91.3 |
| $\mathrm{U}_{\mathrm{C}}$ | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 1.0 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 91.4 | 94.1 | 94.4 | 93.8 | 93.2 | 92.6 | 91.0 | 93.8 | 90.1 | 84.4 | 79.5 | 72.7 | 64.0 | [55.5] |
| $\mathrm{U}_{\mathrm{c}}$ | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 | 1.0 | 1.0 | 1.2 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

Bin 9.5: 1/3 Spectra Sound Power in dB(A)


Third Octave Frequency [Hz]

| Bin 9.5: 1/3 Spectra Sound Power in dB(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 61.2 | 67.2 | 70.2 | 74.1 | 77.7 | 84.4 | 87.8 | 84.8 | 89.6 | 92.6 | 89.1 | 91.7 | 91.2 | 91.1 |
| UC | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 1.0 | 1.1 | 0.8 | 0.7 | 0.9 | 0.8 | 0.9 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 91.3 | 93.9 | 94.2 | 93.7 | 93.1 | 92.6 | 91.2 | 94.0 | 90.3 | 84.6 | 79.8 | 73.1 | 64.5 | $[55.7]$ |
| UC | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.7 |

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied)

Bin 10: 1/3 Spectra Sound Power in $\mathbf{d B}(A)$


| Bin 10: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.9 | 67.5 | 69.9 | 73.6 | 77.4 | 83.9 | 87.2 | 85.9 | 89.2 | 92.1 | 89.3 | 91.8 | 91.3 | 91.0 |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.8 | 0.7 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 91.2 | 93.7 | 94.0 | 93.6 | 93.0 | 92.5 | 91.2 | 94.4 | 90.5 | 84.5 | 79.7 | 72.9 | 64.4 | [55.7] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.9 | 0.9 | 1.1 | 1.6 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

Bin 10.5: 1/3 Spectra Sound Power in dB(A)


| Bin 10.5: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.7 | 67.3 | 69.6 | 73.5 | 77.0 | 83.6 | 85.6 | 84.4 | 89.0 | 90.8 | 88.8 | 91.1 | 90.6 | 90.4 |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 | 0.8 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 90.6 | 93.2 | 93.7 | 93.3 | 93.0 | 92.3 | 91.2 | 93.9 | 89.6 | 84.2 | 79.4 | 72.6 | 64.2 | [55.7] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.1 | 1.7 |

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

NOISE

Bin 11: 1/3 Spectra Sound Power in dB(A)


Third Octave Frequency [Hz]

| Bin 11: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.4 | 68.3 | 69.3 | 73.2 | 76.7 | 82.7 | 85.5 | 85.0 | 87.8 | 91.0 | 88.7 | 90.4 | 90.1 | 89.7 |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 1.0 | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 90.1 | 93.0 | 93.6 | 93.6 | 93.4 | 92.9 | 91.3 | 94.1 | 89.7 | 84.1 | 79.2 | 72.3 | 64.1 | [55.9] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.9 | 0.9 | 1.0 | 1.6 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

NOISE

Bin 11.5: 1/3 Spectra Sound Power in dB(A)


| Bin 11.5: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.8 | 69.9 | 69.9 | 73.7 | 77.3 | 82.0 | 86.8 | 84.8 | 87.4 | 91.0 | 88.5 | 90.4 | 89.9 | 89.7 |
| $\mathrm{U}_{\mathrm{C}}$ | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 90.3 | 93.2 | 93.9 | 94.0 | 94.0 | 93.6 | 91.6 | 94.1 | 90.2 | 84.3 | 79.3 | 72.4 | 64.1 | [55.7] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 | 0.8 | 0.8 | 1.0 | 1.0 | 1.2 | 1.7 |

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).

NOISE

Bin 12: 1/3 Spectra Sound Power in $\mathbf{d B}(A)$


Third Octave Frequency [Hz]

| Bin 12: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.9 | 70.1 | 70.0 | 73.8 | 77.2 | 82.1 | 86.9 | 82.9 | 87.3 | 90.9 | 88.5 | 90.0 | 89.5 | 89.2 |
| $\mathrm{U}_{\mathrm{C}}$ | 1.0 | 0.9 | 0.9 | 1.0 | 0.9 | 0.9 | 1.0 | 1.7 | 0.8 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 89.6 | 92.6 | 93.5 | 93.6 | 93.9 | 93.4 | 91.5 | 93.3 | 89.3 | 84.1 | 78.8 | 72.1 | 64.0 | [56.2] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 0.9 | 1.1 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

NOISE

Bin 12.5: 1/3 Spectra Sound Power in dB(A)


Third Octave Frequency [Hz]

| Bin 12.5: 1/3 Spectra Sound Power in $\mathrm{dB}(\mathrm{A})$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency[Hz] | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 |
| Laeq | 60.7 | 70.7 | 69.8 | 73.8 | 77.2 | 81.8 | 87.7 | 83.0 | 86.8 | 91.0 | 88.6 | 90.1 | 89.3 | 88.9 |
| $\mathrm{U}_{\mathrm{C}}$ | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 1.5 | 0.8 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 |
| Frequency[Hz] | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 |
| Laeq | 89.1 | 92.4 | 93.4 | 93.7 | 94.2 | 93.7 | 91.8 | 92.9 | 89.2 | 84.4 | 78.8 | 72.1 | 63.9 | [55.7] |
| $\mathrm{U}_{\mathrm{C}}$ | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.7 |

[ ] Total Noise less than 3 dB greater than background ( 3 dB correction applied).

NOISE

# APPENDIX D: TONALITY ASSESSMENT 

(Sn
NOISE

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| BIN 7.5: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | Lpn,avg,j,k | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{j}, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dLti,1,7.5: | 62.5 | 1.56 | 21.5 | 35.8 | 37.7 | -2.0 | -2.0 | 0.1 |
| dL ${ }_{\text {t1, 2,7,5: }}$ | 57.8 | 1.56 | 21.6 | 34.4 | 37.9 | -3.5 | -2.0 | -1.5 |
| dL ${ }_{\text {ti, }, 7,7,5}$ | 57.8 | 1.56 | 21.9 | 36.2 | 38.2 | -1.9 | -2.0 | 0.1 |
|  | 65.6 | 1.56 | 23.7 | 33.7 | 39.9 | -6.2 | -2.0 | -4.2 |
| dL ${ }_{\text {t1, } 6,7.5 \text { : }}$ | 67.2 | 1.56 | 23.9 | 33.0 | 40.2 | -7.2 | -2.0 | -5.1 |
|  | 65.6 | 1.56 | 22.6 | 35.3 | 38.8 | -3.5 | -2.0 | -1.5 |
| dL ${ }_{\text {ti, }, 7,7,5}$ | 67.2 | 1.56 | 22.5 | 32.7 | 38.7 | -6.0 | -2.0 | -4.0 |
| dLti,9,7.5: | 64.1 | 1.56 | 22.7 | 35.0 | 39.0 | -3.9 | -2.0 | -1.9 |
| dLti,10,7.5: | 67.2 | 1.56 | 24.7 | 31.2 | 40.9 | -9.8 | -2.0 | -7.8 |
| dL ${ }_{\text {ti,11,7.5: }}$ | 57.8 | 1.56 | 24.4 | 31.0 | 40.6 | -9.6 | -2.0 | -7.6 |
| dL ${ }_{\text {t1,13,7.5: }}$ | 64.1 | 1.56 | 24.3 | 34.1 | 40.5 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\mathrm{t} 1,14,7,5}$ : | 64.1 | 1.56 | 22.1 | 34.1 | 38.3 | -4.2 | -2.0 | -2.2 |
| dLti,15,7.5: | 67.2 | 1.56 | 23.2 | 35.2 | 39.4 | -4.2 | -2.0 | -2.2 |
| dLti,16,7.5: | 67.2 | 1.56 | 22.2 | 34.9 | 38.5 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,17,7,5}$ : | 68.8 | 1.56 | 23.1 | 35.5 | 39.3 | -3.8 | -2.0 | -1.8 |
| dLti,18,7.5: | 67.2 | 1.56 | 23.1 | 35.1 | 39.3 | -4.2 | -2.0 | -2.2 |
| dL ${ }_{\text {t1,20,7.5: }}$ | 64.1 | 1.56 | 24.8 | 33.2 | 41.1 | -7.9 | -2.0 | -5.9 |
| dLti,21,7.5: | 67.2 | 1.56 | 23.0 | 35.2 | 39.2 | -4.0 | -2.0 | -2.0 |
| dLti,22,7.5: | 64.1 | 1.56 | 24.2 | 33.7 | 40.4 | -6.7 | -2.0 | -4.7 |
| dL ${ }_{\text {t1,26,7.5: }}$ | 65.6 | 1.56 | 22.6 | 37.2 | 38.8 | -1.6 | -2.0 | 0.4 |
| dLti,27,7.5: | 64.1 | 1.56 | 22.5 | 35.0 | 38.7 | -3.8 | -2.0 | -1.8 |
| dL ${ }_{\text {t1,28,7.5: }}$ | 64.1 | 1.56 | 21.2 | 35.3 | 37.5 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {t1,29,7.5: }}$ | 64.1 | 1.56 | 21.4 | 36.2 | 37.6 | -1.4 | -2.0 | 0.6 |
| dL ${ }_{\text {t1, 30,7.5: }}$ | 62.5 | 1.56 | 22.0 | 35.6 | 38.2 | -2.6 | -2.0 | -0.6 |
| dLti,31,7.5: | 64.1 | 1.56 | 20.7 | 33.6 | 36.9 | -3.3 | -2.0 | -1.3 |
| dLti,32,7.5: | 67.2 | 1.56 | 23.3 | 34.9 | 39.5 | -4.6 | -2.0 | -2.6 |
| dL ${ }_{\text {t1,33,7.5: }}$ | 64.1 | 1.56 | 23.2 | 33.9 | 39.4 | -5.5 | -2.0 | -3.5 |
| dL ${ }_{\text {t1,34,7,5: }}$ | 68.8 | 1.56 | 22.7 | 34.9 | 38.9 | -4.0 | -2.0 | -2.0 |
| dL ${ }_{\text {t1,35,7.5: }}$ | 67.2 | 1.56 | 23.9 | 32.5 | 40.1 | -7.6 | -2.0 | -5.6 |
| dLti,36,7.5: | 65.6 | 1.56 | 23.9 | 30.5 | 40.2 | -9.7 | -2.0 | -7.7 |
| dLti,37,7.5: | 64.1 | 1.56 | 24.7 | 32.8 | 40.9 | -8.0 | -2.0 | -6.0 |
| dL ${ }_{\text {t1,40,7.5: }}$ | 67.2 | 1.56 | 23.5 | 34.4 | 39.8 | -5.4 | -2.0 | -3.4 |
| dLti,41,7.5: | 65.6 | 1.56 | 23.1 | 33.2 | 39.4 | -6.2 | -2.0 | -4.2 |
| dL ${ }_{\text {t1,42,7.5: }}$ | 65.6 | 1.56 | 22.8 | 32.4 | 39.0 | -6.6 | -2.0 | -4.6 |
| dL ${ }_{\text {t1,43,7.5: }}$ | 68.8 | 1.56 | 23.2 | 30.9 | 39.4 | -8.6 | -2.0 | -6.6 |
| $\mathrm{dL}_{\mathrm{t} 1,44,7,5}$ | 64.1 | 1.56 | 23.1 | 34.1 | 39.3 | -5.3 | -2.0 | -3.3 |
| $\mathrm{dL}_{\mathrm{t} 1,45,7,5}$ : | 64.1 | 1.56 | 23.2 | 32.3 | 39.4 | -7.2 | -2.0 | -5.2 |
| dLti,47,7.5: | 65.6 | 1.56 | 25.0 | 31.1 | 41.2 | -10.1 | -2.0 | -8.1 |
| dL ${ }_{\text {t } 2,23,7.5}$ : | 100.0 | 1.56 | 27.3 | 40.1 | 43.6 | -3.4 | -2.0 | -1.4 |
| dL ${ }_{\text {t } 2,24,7,5:}$ | 89.1 | 1.56 | 26.8 | 40.6 | 43.1 | -2.5 | -2.0 | -0.5 |
| dL ${ }_{\text {t2,25,7.5: }}$ | 84.4 | 1.56 | 24.9 | 36.6 | 41.2 | -4.6 | -2.0 | -2.6 |
| dLix,5,7.5: | 134.4 | 1.56 | 28.0 | 34.3 | 44.3 | -10.0 | -2.0 | -8.0 |
| dLL ${ }_{\text {I3,8,7.5: }}$ | 134.4 | 1.56 | 25.8 | 32.9 | 42.1 | -9.2 | -2.0 | -7.2 |
| dL ${ }_{\text {i3,10,7.5: }}$ | 134.4 | 1.56 | 27.7 | 36.3 | 44.0 | -7.7 | -2.0 | -5.7 |
| $\mathrm{dL}_{\text {t3,11,7.5: }}$ | 132.8 | 1.56 | 27.0 | 34.6 | 43.3 | -8.7 | -2.0 | -6.7 |
| dL ${ }_{\text {t3,15,7.5: }}$ | 134.4 | 1.56 | 26.5 | 35.1 | 42.8 | -7.7 | -2.0 | -5.7 |
| $\mathrm{dL}_{\text {t3,16,7.5: }}$ | 134.4 | 1.56 | 26.0 | 35.3 | 42.3 | -7.0 | -2.0 | -5.0 |
| dLis,21,7.5: | 134.4 | 1.56 | 26.5 | 33.1 | 42.8 | -9.7 | -2.0 | -7.7 |
| dL $\mathrm{L}_{\text {t3,28,7.5: }}$ | 129.7 | 1.56 | 25.3 | 31.5 | 41.6 | -10.1 | -2.0 | -8.1 |
| dL ${ }_{\text {t } 3,29,7.5:}$ | 129.7 | 1.56 | 25.2 | 34.0 | 41.5 | -7.5 | -2.0 | -5.5 |
| dL ${ }_{\text {t3,32,7.5: }}$ | 134.4 | 1.56 | 26.6 | 34.5 | 42.9 | -8.4 | -2.0 | -6.4 |

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| dL ${ }_{\text {t3,40,7.5: }}$ | 134.4 | 1.56 | 27.1 | 35.1 | 43.4 | -8.3 | -2.0 | -6.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t } 3,41,7.5}$ | 132.8 | 1.56 | 26.8 | 33.7 | 43.1 | -9.4 | -2.0 | -7.4 |
| $\mathrm{dL}_{\mathrm{t} 4,36,7.5}$ : | 175.0 | 1.56 | 27.4 | 33.5 | 43.7 | -10.2 | -2.0 | -8.2 |
| dLt5,37,7.5: | 232.8 | 1.56 | 26.6 | 33.9 | 43.0 | -9.1 | -2.1 | -7.0 |
| dL ${ }_{\text {t5,39,7.5: }}$ | 232.8 | 1.56 | 26.5 | 32.6 | 43.0 | -10.3 | -2.1 | -8.2 |
| dL ${ }_{\text {t5,40,7.5: }}$ | 232.8 | 1.56 | 27.1 | 33.7 | 43.5 | -9.9 | -2.1 | -7.8 |
| dL ${ }_{\text {t5,41,7.5: }}$ | 232.8 | 1.56 | 26.8 | 34.4 | 43.2 | -8.9 | -2.1 | -6.8 |
| dL ${ }_{\text {t5,44,7,5: }}$ | 232.8 | 1.56 | 26.7 | 33.0 | 43.2 | -10.2 | -2.1 | -8.1 |
| dL ${ }_{\text {t5,48,7.5: }}$ | 232.8 | 1.56 | 27.8 | 35.3 | 44.2 | -8.9 | -2.1 | -6.8 |
| dL $\mathrm{d}_{\text {6,46,7.5: }}$ | 325.0 | 1.56 | 26.6 | 33.5 | 43.1 | -9.6 | -2.1 | -7.5 |
| dL ${ }_{\text {t7,15,7.5: }}$ | 7503.6 | 1.56 | -15.4 | -9.1 | 13.5 | -22.6 | -4.9 | -17.7 |
| dL ${ }_{\text {t7,43, }, 5.5}$ | 7652.0 | 1.56 | -16.1 | -7.0 | 12.9 | -19.9 | -5.0 | -14.9 |
| dL ${ }_{\text {t7,45,7,5: }}$ | 7506.7 | 1.56 | -16.4 | -10.2 | 12.5 | -22.6 | -4.9 | -17.7 |

BIN 7.5: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn,j, } \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 62.5 | -2.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 57.8 | -3.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 57.8 | -1.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 65.6 | -6.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | --- | --- | --- | --- | 134.4 | -10.0 | --- | --- | --- | --- | --- | --- |
| 6 | 67.2 | -7.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 65.6 | -3.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 67.2 | -6.0 | --- | --- | 134.4 | -9.2 | --- | --- | --- | --- | --- | --- |
| 9 | 64.1 | -3.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 67.2 | -9.8 | --- | --- | 134.4 | -7.7 | --- | --- | --- | --- | --- | --- |
| 11 | 57.8 | -9.6 | --- | --- | 132.8 | -8.7 | --- | --- | --- | --- | --- | --- |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 64.1 | -6.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 64.1 | -4.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 67.2 | -4.2 | --- | --- | 134.4 | -7.7 | --- | --- | --- | --- | --- | --- |
| 16 | 67.2 | -3.6 | --- | --- | 134.4 | -7.0 | --- | --- | --- | --- | --- | --- |
| 17 | 68.8 | -3.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 67.2 | -4.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 64.1 | -7.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 67.2 | -4.0 | --- | --- | 134.4 | -9.7 | --- | --- | --- | --- | --- | --- |
| 22 | 64.1 | -6.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | --- | --- | 100.0 | -3.4 | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | 89.1 | -2.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | 84.4 | -4.6 | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 65.6 | -1.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 64.1 | -3.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | 64.1 | -2.2 | --- | --- | 129.7 | -10.1 | --- | --- | --- | --- | --- | --- |
| 29 | 64.1 | -1.4 | --- | --- | 129.7 | -7.5 | --- | --- | --- | --- | --- | --- |
| 30 | 62.5 | -2.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 64.1 | -3.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 32 | 67.2 | -4.6 | --- | --- | 134.4 | -8.4 | --- | --- | --- | --- | --- | --- |
| 33 | 64.1 | -5.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 34 | 68.8 | -4.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 67.2 | -7.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | 65.6 | -9.7 | --- | --- | --- | --- | 175.0 | -10.2 | --- | --- | --- | --- |


| 37 | 64.1 | -8.0 | --- | --- | --- | --- | --- | --- | 232.8 | -9.1 | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 39 | --- | --- | --- | --- | --- | --- | --- | --- | 232.8 | -10.3 | --- | --- |
| 40 | 67.2 | -5.4 | --- | --- | 134.4 | -8.3 | --- | --- | 232.8 | -9.9 | --- | --- |
| 41 | 65.6 | -6.2 | --- | --- | 132.8 | -9.4 | --- | --- | 232.8 | -8.9 | --- | --- |
| 42 | 65.6 | -6.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 43 | 68.8 | -8.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 44 | 64.1 | -5.3 | --- | --- | --- | --- | --- | --- | 232.8 | -10.2 | --- | --- |
| 45 | 64.1 | -7.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 46 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 325.0 | -9.6 |
| 47 | 65.6 | -10.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 48 | --- | --- | --- | --- | --- | --- | --- | --- | 232.8 | -8.9 | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL} \mathrm{L}_{\text {[ }}[\mathrm{dB}]$ | 64.5 | -5.6 | 99.5 | -13.0 | 134.1 | -12.8 | 175.0 | -16.1 | 232.8 | -14.7 | 325.0 | -16.3 |
| $\mathrm{L}_{\text {a }}$ [dB] |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -3.6 |  | -11.0 |  | -10.8 |  | -14.1 |  | -12.7 |  | -14.1 |
| $\mathrm{K}_{\text {TN }}[\mathrm{dB}$ ] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

BIN 7.5: Narrowband spectrum


## BIN 7.5: Narrowband spectrum



BIN 7.5: Narrowband spectrum


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| BIN 8: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | $\mathrm{L}_{\text {pn,avg, }, \mathrm{j} \text {, }}$ | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{j}, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dL $\mathrm{Lt}_{1,1,8}$ | 135.9 | 1.56 | 26.8 | 35.6 | 43.1 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\text {t1, } 3,8}$ | 140.6 | 1.56 | 28.1 | 42.1 | 44.4 | -2.3 | -2.0 | -0.3 |
| $\mathrm{dL}_{\text {t1, } 4,8}$ : | 139.1 | 1.56 | 27.6 | 38.2 | 43.9 | -5.7 | -2.0 | -3.7 |
| dL $\mathrm{Lt}_{1,5,8}$ | 139.1 | 1.56 | 27.3 | 40.6 | 43.6 | -3.0 | -2.0 | -0.9 |
| $\mathrm{dL}_{\text {t1, } 6,8}$ : | 140.6 | 1.56 | 27.4 | 36.9 | 43.7 | -6.7 | -2.0 | -4.7 |
| dL $\mathrm{Lt}_{1,7,8}$ | 140.6 | 1.56 | 27.0 | 39.7 | 43.3 | -3.6 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {t1,9,8: }}$ | 140.6 | 1.56 | 26.0 | 39.5 | 42.3 | -2.8 | -2.0 | -0.7 |
| d $L_{\text {ti, 10, }}$ : | 142.2 | 1.56 | 27.9 | 34.6 | 44.2 | -9.7 | -2.0 | -7.6 |
| dLti,11,8: | 140.6 | 1.56 | 26.7 | 44.2 | 43.0 | 1.1 | -2.0 | 3.1 |
| dL ${ }_{\text {ti, 12, }}$ : | 140.6 | 1.56 | 26.5 | 43.9 | 42.8 | 1.1 | -2.0 | 3.1 |
| $\mathrm{dL}_{\mathrm{t} 1,13,8}$ : | 140.6 | 1.56 | 26.6 | 40.1 | 42.9 | -2.9 | -2.0 | -0.8 |
| $\mathrm{dL}_{\text {t1,14,8: }}$ | 139.1 | 1.56 | 27.0 | 33.7 | 43.3 | -9.6 | -2.0 | -7.6 |
| dLti,15,8: | 140.6 | 1.56 | 27.0 | 41.3 | 43.3 | -2.1 | -2.0 | -0.1 |
| dLtilis,8: | 142.2 | 1.56 | 27.3 | 37.4 | 43.6 | -6.2 | -2.0 | -4.2 |
| dL ${ }_{\text {t1,19,8: }}$ | 139.1 | 1.56 | 26.7 | 38.4 | 43.0 | -4.5 | -2.0 | -2.5 |
| dLti,20,8: | 135.9 | 1.56 | 27.2 | 39.3 | 43.5 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t1, 21, }}$ : | 139.1 | 1.56 | 26.2 | 43.8 | 42.5 | 1.3 | -2.0 | 3.3 |
| dLtil2, ${ }^{\text {d }}$ : | 140.6 | 1.56 | 27.7 | 42.7 | 44.0 | -1.3 | -2.0 | 0.7 |
| dLti,23,8: | 140.6 | 1.56 | 26.7 | 43.0 | 43.0 | 0.0 | -2.0 | 2.0 |
| dL ${ }_{\text {ti } 24,8:}$ | 139.1 | 1.56 | 26.9 | 41.4 | 43.2 | -1.8 | -2.0 | 0.2 |
| dLtil,2,8: | 140.6 | 1.56 | 28.1 | 40.2 | 44.4 | -4.3 | -2.0 | -2.3 |
| dLti,27,8: | 140.6 | 1.56 | 27.5 | 42.3 | 43.8 | -1.5 | -2.0 | 0.5 |
| dL ${ }_{\text {ti, } 29,8}$ : | 140.6 | 1.56 | 29.2 | 36.0 | 45.5 | -9.5 | -2.0 | -7.4 |
|  | 142.2 | 1.56 | 29.4 | 37.5 | 45.7 | -8.2 | -2.0 | -6.2 |
| dLtil,31,8: | 142.2 | 1.56 | 28.5 | 36.2 | 44.8 | -8.5 | -2.0 | -6.5 |
| dLtil,3,8: | 140.6 | 1.56 | 29.0 | 35.2 | 45.3 | -10.1 | -2.0 | -8.1 |
| dL ${ }_{\text {t1, } 3,8,8}$ | 140.6 | 1.56 | 28.3 | 43.1 | 44.6 | -1.5 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t1,34,8: }}$ | 140.6 | 1.56 | 30.4 | 41.4 | 46.7 | -5.3 | -2.0 | -3.3 |
| dL ${ }_{\text {t1, } 3,8,8}$ | 140.6 | 1.56 | 30.4 | 39.2 | 46.7 | -7.5 | -2.0 | -5.5 |
| dLtil,36,8: | 139.1 | 1.56 | 30.0 | 44.6 | 46.3 | -1.7 | -2.0 | 0.3 |
| dLti,37,8: | 139.1 | 1.56 | 27.7 | 41.3 | 44.0 | -2.7 | -2.0 | -0.7 |
| dL ${ }_{\text {t1, } 3,8,8}$ | 139.1 | 1.56 | 27.8 | 41.8 | 44.1 | -2.3 | -2.0 | -0.3 |
| dLtil,39,8: | 139.1 | 1.56 | 27.8 | 39.8 | 44.1 | -4.3 | -2.0 | -2.3 |
| dL ${ }_{\text {LT,40,8: }}$ | 142.2 | 1.56 | 27.5 | 39.3 | 43.8 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\mathrm{t} 1,41,8}$ | 140.6 | 1.56 | 27.8 | 40.6 | 44.1 | -3.4 | -2.0 | -1.4 |
| dL ${ }_{\text {ti, 42, }}$ : | 142.2 | 1.56 | 27.7 | 38.6 | 44.0 | -5.4 | -2.0 | -3.4 |
| dL ${ }_{\text {L1,44,8: }}$ | 140.6 | 1.56 | 28.0 | 36.7 | 44.3 | -7.7 | -2.0 | -5.6 |
| dLti,45,8: | 142.2 | 1.56 | 29.6 | 37.6 | 45.9 | -8.3 | -2.0 | -6.3 |
| $\mathrm{dL}_{\mathrm{t} 1,46,8}$ | 139.1 | 1.56 | 28.4 | 40.0 | 44.7 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t}_{11,47,8}}$ | 140.6 | 1.56 | 28.1 | 42.4 | 44.4 | -2.1 | -2.0 | 0.0 |
| dL ${ }_{\text {t1,49,8: }}$ | 139.1 | 1.56 | 29.3 | 39.5 | 45.6 | -6.1 | -2.0 | -4.0 |
| dL ${ }_{\text {t2, 16, }}$ : | 96.9 | 1.56 | 28.1 | 44.8 | 44.4 | 0.5 | -2.0 | 2.5 |
| dL ${ }_{\text {L2,17, }}$ : | 92.2 | 1.56 | 27.4 | 43.6 | 43.7 | -0.1 | -2.0 | 1.9 |
| $\mathrm{dL}_{\mathrm{L}_{2}, 22,8}$ : | 85.9 | 1.56 | 25.9 | 40.1 | 42.2 | -2.2 | -2.0 | -0.1 |
| dL ${ }_{\text {L } 2,34,8:}$ | 89.1 | 1.56 | 29.1 | 43.8 | 45.4 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\text {t3, } 1,8}$ : | 135.9 | 1.56 | 26.8 | 35.6 | 43.1 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\text {t3, } 3,8}$ : | 140.6 | 1.56 | 28.1 | 42.1 | 44.4 | -2.3 | -2.0 | -0.3 |
| dL ${ }_{\text {ti, } 4,8}$ | 139.1 | 1.56 | 27.6 | 38.2 | 43.9 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\text {t3,5,8: }}$ | 139.1 | 1.56 | 27.3 | 40.6 | 43.6 | -3.0 | -2.0 | -0.9 |
| dL $\mathrm{L}_{3,6,8}$ : | 140.6 | 1.56 | 27.4 | 36.9 | 43.7 | -6.7 | -2.0 | -4.7 |
| $\mathrm{dL}_{\text {ti, } 7,8}$ : | 140.6 | 1.56 | 27.0 | 39.7 | 43.3 | -3.6 | -2.0 | -1.5 |

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| $\mathrm{dL}_{\mathrm{t} 3,9,8}$ : | 140.6 | 1.56 | 26.0 | 39.5 | 42.3 | -2.8 | -2.0 | -0.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLis,10,8: | 142.2 | 1.56 | 27.9 | 34.6 | 44.2 | -9.7 | -2.0 | -7.6 |
| $\mathrm{dL}_{\mathrm{t}, 11,8}$ : | 140.6 | 1.56 | 26.7 | 44.2 | 43.0 | 1.1 | -2.0 | 3.1 |
| $\mathrm{dL}_{\mathrm{t} 3,12,8}$ | 140.6 | 1.56 | 26.5 | 43.9 | 42.8 | 1.1 | -2.0 | 3.1 |
| dL ${ }_{\text {L } 3,13,8}$ | 140.6 | 1.56 | 26.6 | 40.1 | 42.9 | -2.9 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t}_{3,14,8} \text { : }}$ | 139.1 | 1.56 | 27.0 | 33.7 | 43.3 | -9.6 | -2.0 | -7.6 |
| dL ${ }_{\text {L } 3,15,8}$ | 140.6 | 1.56 | 27.0 | 41.3 | 43.3 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\mathrm{L}, 18,8}$ | 142.2 | 1.56 | 27.3 | 37.4 | 43.6 | -6.2 | -2.0 | -4.2 |
| dLti3,19,8: | 139.1 | 1.56 | 26.7 | 38.4 | 43.0 | -4.5 | -2.0 | -2.5 |
| dL ${ }_{\text {L } 3,20,8:}$ | 135.9 | 1.56 | 27.2 | 39.3 | 43.5 | -4.2 | -2.0 | -2.2 |
| dL ${ }_{\text {L } 3,21,8}$ | 139.1 | 1.56 | 26.2 | 43.8 | 42.5 | 1.3 | -2.0 | 3.3 |
| $\mathrm{dL}_{\mathrm{L}, 22,8}$ | 140.6 | 1.56 | 27.7 | 42.7 | 44.0 | -1.3 | -2.0 | 0.7 |
| $\mathrm{dL}_{\mathrm{t} 3,23,8}$ | 140.6 | 1.56 | 26.7 | 43.0 | 43.0 | 0.0 | -2.0 | 2.0 |
| dLis,24,8: | 139.1 | 1.56 | 26.9 | 41.4 | 43.2 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t}, 25,8}$ : | 140.6 | 1.56 | 28.1 | 40.2 | 44.4 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{L}, 27,8}$ | 140.6 | 1.56 | 27.5 | 42.3 | 43.8 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t}, 29,8}$ | 140.6 | 1.56 | 29.2 | 36.0 | 45.5 | -9.5 | -2.0 | -7.4 |
| dL ${ }_{\text {L } 3,30,8:}$ | 142.2 | 1.56 | 29.4 | 37.5 | 45.7 | -8.2 | -2.0 | -6.2 |
| dL ${ }_{\text {t } 3,31,8}$ : | 142.2 | 1.56 | 28.5 | 36.2 | 44.8 | -8.5 | -2.0 | -6.5 |
| dL ${ }_{\text {L } 3,32,8:}$ | 140.6 | 1.56 | 29.0 | 35.2 | 45.3 | -10.1 | -2.0 | -8.1 |
| dLti3,33,8: | 140.6 | 1.56 | 28.3 | 43.1 | 44.6 | -1.5 | -2.0 | 0.6 |
| $\mathrm{dL}_{\mathrm{t} 3,34,8}$ | 140.6 | 1.56 | 30.4 | 41.4 | 46.7 | -5.3 | -2.0 | -3.3 |
| $\mathrm{dL}_{\mathrm{L} 3,35,8}$ : | 140.6 | 1.56 | 30.4 | 39.2 | 46.7 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\mathrm{L}, 36,8}$ | 139.1 | 1.56 | 30.0 | 44.6 | 46.3 | -1.7 | -2.0 | 0.3 |
| dL ${ }_{\text {t } 3,37,8}$ | 139.1 | 1.56 | 27.7 | 41.3 | 44.0 | -2.7 | -2.0 | -0.7 |
| dL ${ }_{\text {L }}^{3,38,8}$ : | 139.1 | 1.56 | 27.8 | 41.8 | 44.1 | -2.3 | -2.0 | -0.3 |
| dL ${ }_{\text {t } 3,39,8:}$ | 139.1 | 1.56 | 27.8 | 39.8 | 44.1 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{L}, 40,8}$ : | 142.2 | 1.56 | 27.5 | 39.3 | 43.8 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\mathrm{L}, 41,8}$ | 140.6 | 1.56 | 27.8 | 40.6 | 44.1 | -3.4 | -2.0 | -1.4 |
| $\mathrm{dL}_{\mathrm{t} 3,42,8}$ | 142.2 | 1.56 | 27.7 | 38.6 | 44.0 | -5.4 | -2.0 | -3.4 |
| dL ${ }_{\text {L } 3,44,8:}$ | 140.6 | 1.56 | 28.0 | 36.7 | 44.3 | -7.7 | -2.0 | -5.6 |
| dLti3,45,8: | 142.2 | 1.56 | 29.6 | 37.6 | 45.9 | -8.3 | -2.0 | -6.3 |
| $\mathrm{dL}_{\mathrm{L}_{3,46,8}}$ | 139.1 | 1.56 | 28.4 | 40.0 | 44.7 | -4.7 | -2.0 | -2.7 |
| dL ${ }_{\text {L } 3,47,8:}$ | 140.6 | 1.56 | 28.1 | 42.4 | 44.4 | -2.1 | -2.0 | 0.0 |
| $\mathrm{dL}_{\mathrm{L} 3,49,8}$ | 139.1 | 1.56 | 29.3 | 39.5 | 45.6 | -6.1 | -2.0 | -4.0 |
| dLti4,1,8: | 135.9 | 1.56 | 26.8 | 35.6 | 43.1 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{44,3,8}$ | 140.6 | 1.56 | 28.1 | 42.1 | 44.4 | -2.3 | -2.0 | -0.3 |
| dLti4, ${ }_{\text {a }}$ : | 139.1 | 1.56 | 27.6 | 38.2 | 43.9 | -5.7 | -2.0 | -3.7 |
| dLti4,5,8: | 139.1 | 1.56 | 27.3 | 40.6 | 43.6 | -3.0 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t}_{4,6,8} \text { : }}$ | 140.6 | 1.56 | 27.4 | 36.9 | 43.7 | -6.7 | -2.0 | -4.7 |
| $\mathrm{dL}_{44,7,8}$ | 140.6 | 1.56 | 27.0 | 39.7 | 43.3 | -3.6 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {t4,9,8: }}$ | 140.6 | 1.56 | 26.0 | 39.5 | 42.3 | -2.8 | -2.0 | -0.7 |
| dLti4,10,8: | 142.2 | 1.56 | 27.9 | 34.6 | 44.2 | -9.7 | -2.0 | -7.6 |
| dLti4,11,8: | 140.6 | 1.56 | 26.7 | 44.2 | 43.0 | 1.1 | -2.0 | 3.1 |
| $\mathrm{dL}_{\mathrm{t}, 12,8}$ : | 140.6 | 1.56 | 26.5 | 43.9 | 42.8 | 1.1 | -2.0 | 3.1 |
| $\mathrm{dL}_{\mathrm{t}, 13,8}$ : | 140.6 | 1.56 | 26.6 | 40.1 | 42.9 | -2.9 | -2.0 | -0.8 |
| $\mathrm{dL}_{\text {ti, 14, }}$ : | 139.1 | 1.56 | 27.0 | 33.7 | 43.3 | -9.6 | -2.0 | -7.6 |
| dLti4,15,8: | 140.6 | 1.56 | 27.0 | 41.3 | 43.3 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\text {t4,18,8: }}$ | 142.2 | 1.56 | 27.3 | 37.4 | 43.6 | -6.2 | -2.0 | -4.2 |
| $\mathrm{dL}_{\text {ti, } 19,8:}$ | 139.1 | 1.56 | 26.7 | 38.4 | 43.0 | -4.5 | -2.0 | -2.5 |
| dLti4, 20,8 : | 135.9 | 1.56 | 27.2 | 39.3 | 43.5 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{44,21,8}$ | 139.1 | 1.56 | 26.2 | 43.8 | 42.5 | 1.3 | -2.0 | 3.3 |
| dL ${ }_{\text {t } 4,22,8:}$ | 140.6 | 1.56 | 27.7 | 42.7 | 44.0 | -1.3 | -2.0 | 0.7 |
| $\mathrm{dL}_{\text {t4, 23,8: }}$ | 140.6 | 1.56 | 26.7 | 43.0 | 43.0 | 0.0 | -2.0 | 2.0 |

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| dL ${ }_{\text {t4, } 24,8 \text { : }}$ | 139.1 | 1.56 | 26.9 | 41.4 | 43.2 | -1.8 | -2.0 | 0.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLti4,25,8: | 140.6 | 1.56 | 28.1 | 40.2 | 44.4 | -4.3 | -2.0 | -2.3 |
| dL ${ }_{\text {t4, } 27,8}$ : | 140.6 | 1.56 | 27.5 | 42.3 | 43.8 | -1.5 | -2.0 | 0.5 |
| dLt4,29,8: | 140.6 | 1.56 | 29.2 | 36.0 | 45.5 | -9.5 | -2.0 | -7.4 |
| dL ${ }_{\text {t4, } 3,8}$ : | 142.2 | 1.56 | 29.4 | 37.5 | 45.7 | -8.2 | -2.0 | -6.2 |
| dL ${ }_{\text {t4,31,8: }}$ | 142.2 | 1.56 | 28.5 | 36.2 | 44.8 | -8.5 | -2.0 | -6.5 |
| dL ti, $32,8^{\text {: }}$ | 140.6 | 1.56 | 29.0 | 35.2 | 45.3 | -10.1 | -2.0 | -8.1 |
| dL ${ }_{\text {t4, 3, }}$ : | 140.6 | 1.56 | 28.3 | 43.1 | 44.6 | -1.5 | -2.0 | 0.6 |
| dLt+4,34,8: | 140.6 | 1.56 | 30.4 | 41.4 | 46.7 | -5.3 | -2.0 | -3.3 |
| dL ${ }_{\text {t4, } 3,8}$ : | 140.6 | 1.56 | 30.4 | 39.2 | 46.7 | -7.5 | -2.0 | -5.5 |
| dL ${ }_{\text {t4, } 3,8,8}$ | 139.1 | 1.56 | 30.0 | 44.6 | 46.3 | -1.7 | -2.0 | 0.3 |
| dL t4, 37,8 : $^{\text {a }}$ | 139.1 | 1.56 | 27.7 | 41.3 | 44.0 | -2.7 | -2.0 | -0.7 |
| dL ${ }_{\text {t4, } 3,8,8}$ | 139.1 | 1.56 | 27.8 | 41.8 | 44.1 | -2.3 | -2.0 | -0.3 |
| dLti4,39,8: | 139.1 | 1.56 | 27.8 | 39.8 | 44.1 | -4.3 | -2.0 | -2.3 |
| dL ${ }_{\text {t4,40, }}$ : | 142.2 | 1.56 | 27.5 | 39.3 | 43.8 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\text {t4,41, }}$ : | 140.6 | 1.56 | 27.8 | 40.6 | 44.1 | -3.4 | -2.0 | -1.4 |
| dL ${ }_{\text {t4,42,8: }}$ | 142.2 | 1.56 | 27.7 | 38.6 | 44.0 | -5.4 | -2.0 | -3.4 |
| dL ${ }_{\text {t4,44, }}$ : | 140.6 | 1.56 | 28.0 | 36.7 | 44.3 | -7.7 | -2.0 | -5.6 |
| dLt ${ }_{\text {t } 4,4,8 \text { : }}$ | 142.2 | 1.56 | 29.6 | 37.6 | 45.9 | -8.3 | -2.0 | -6.3 |
| dL ${ }_{\text {t4,46, }}$ : | 139.1 | 1.56 | 28.4 | 40.0 | 44.7 | -4.7 | -2.0 | -2.7 |
| dL $\mathrm{t}_{4,47,8}$ | 140.6 | 1.56 | 28.1 | 42.4 | 44.4 | -2.1 | -2.0 | 0.0 |
| dL ${ }_{\text {t4,4, }}$ : | 139.1 | 1.56 | 29.3 | 39.5 | 45.6 | -6.1 | -2.0 | -4.0 |
| $\mathrm{dL}_{\text {t5,28,8: }}$ | 175.0 | 1.56 | 27.6 | 37.6 | 43.9 | -6.4 | -2.0 | -4.3 |
| dL ${ }_{\text {t6,2,8, }}$ : | 232.8 | 1.56 | 27.2 | 33.2 | 43.6 | -10.4 | -2.1 | -8.3 |
| dL ${ }_{\text {t } 6,30,8}$ : | 232.8 | 1.56 | 28.5 | 35.3 | 44.9 | -9.6 | -2.1 | -7.6 |
| dL ${ }_{\text {t } 6,31,8}$ : | 232.8 | 1.56 | 28.0 | 34.8 | 44.4 | -9.6 | -2.1 | -7.6 |
| dL $\mathrm{t}_{6,34,8}$ | 232.8 | 1.56 | 28.8 | 35.3 | 45.3 | -10.0 | -2.1 | -7.9 |
| dL ${ }_{\text {t6,41, }}$ : | 232.8 | 1.56 | 27.5 | 33.8 | 43.9 | -10.1 | -2.1 | -8.1 |
| dL $\mathrm{L}_{\mathrm{t}, 44,8}$ : | 232.8 | 1.56 | 28.3 | 34.4 | 44.8 | -10.3 | -2.1 | -8.3 |
| dL ${ }_{\text {t6,46, }}$ : | 232.8 | 1.56 | 27.5 | 35.2 | 43.9 | -8.7 | -2.1 | -6.6 |
| dL ${ }_{\text {t } 6,47,8}$ | 232.8 | 1.56 | 27.8 | 35.2 | 44.2 | -9.0 | -2.1 | -7.0 |
| dL ${ }_{\text {t7, } 3,8,8}$ | 309.4 | 1.56 | 27.6 | 33.7 | 44.2 | -10.5 | -2.1 | -8.4 |
| dL ${ }_{\text {t7, } 2,8,8}$ | 309.4 | 1.56 | 27.8 | 35.5 | 44.4 | -8.8 | -2.1 | -6.7 |
| dL ${ }_{\text {t7, }} \mathrm{L}_{7,8,8}$ | 309.4 | 1.56 | 28.5 | 35.2 | 45.1 | -9.9 | -2.1 | -7.8 |
| dL ${ }_{\text {t7,46,8: }}$ | 325.0 | 1.56 | 26.8 | 34.3 | 43.4 | -9.1 | -2.1 | -7.0 |
| dLt7,4,8: | 325.0 | 1.56 | 26.7 | 36.7 | 43.3 | -6.6 | -2.1 | -4.5 |
| dL ${ }_{\text {t7,4, }}$ : | 325.0 | 1.56 | 27.3 | 34.3 | 43.9 | -9.6 | -2.1 | -7.4 |
| dL ${ }_{\text {L } 8,28,8:}$ | 7639.5 | 1.56 | -16.2 | -9.9 | 12.8 | -22.7 | -5.0 | -17.7 |
| dLt9,28,8: | 7639.5 | 1.56 | -16.2 | -9.9 | 12.8 | -22.7 | -5.0 | -17.7 |

BIN 8: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{T}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}} \mathrm{k}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 68.8 | -5.2 | --- | --- | 135.9 | -7.5 | 135.9 | -7.5 | --- | --- | --- | --- |
| 2 | 70.3 | -3.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 70.3 | -3.7 | --- | --- | 140.6 | -2.3 | 140.6 | -2.3 | --- | --- | --- | --- |
| 4 | --- | -- | -- | --- | 139.1 | -5.7 | 139.1 | -5.7 | --- | --- | --- | --- |
| 5 | 68.8 | -4.3 | --- | --- | 139.1 | -3.0 | 139.1 | -3.0 | --- | --- | --- | --- |
| 6 | 70.3 | -3.0 | --- | --- | 140.6 | -6.7 | 140.6 | -6.7 | --- | --- | --- | --- |
| 7 | 68.8 | -1.6 | --- | --- | 140.6 | -3.6 | 140.6 | -3.6 | --- | --- | --- | --- |
| 8 | 68.8 | -5.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 70.3 | 0.4 | --- | --- | 140.6 | -2.8 | 140.6 | -2.8 | --- | --- | --- | --- |
| 10 | 70.3 | -2.6 | --- | --- | 142.2 | -9.7 | 142.2 | -9.7 | --- | --- | --- | --- |
| 11 | 70.3 | -3.1 | --- | --- | 140.6 | 1.1 | 140.6 | 1.1 | --- | --- | --- | --- |

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| 12 | 68.8 | -1.7 | --- | --- | 140.6 | 1.1 | 140.6 | 1.1 | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 | 68.8 | -1.7 | --- | --- | 140.6 | -2.9 | 140.6 | -2.9 | --- | --- | --- | --- |
| 14 | 57.8 | -6.4 | --- | --- | 139.1 | -9.6 | 139.1 | -9.6 | --- | --- | --- | --- |
| 15 | 70.3 | -2.9 | --- | --- | 140.6 | -2.1 | 140.6 | -2.1 | --- | --- | --- | --- |
| 16 | --- | --- | 96.9 | 0.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | --- | --- | 92.2 | -0.1 | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 71.9 | -1.4 | --- | --- | 142.2 | -6.2 | 142.2 | -6.2 | --- | --- | --- | --- |
| 19 | 68.8 | -3.4 | --- | --- | 139.1 | -4.5 | 139.1 | -4.5 | --- | --- | --- | --- |
| 20 | 67.2 | -6.0 | --- | --- | 135.9 | -4.2 | 135.9 | -4.2 | --- | --- | --- | --- |
| 21 | --- | --- | --- | --- | 139.1 | 1.3 | 139.1 | 1.3 | --- | --- | --- | --- |
| 22 | --- | --- | 85.9 | -2.2 | 140.6 | -1.3 | 140.6 | -1.3 | --- | --- | --- | -- |
| 23 | 70.3 | -0.6 | --- | --- | 140.6 | 0.0 | 140.6 | 0.0 | --- | --- | --- | --- |
| 24 | 68.8 | -4.2 | --- | --- | 139.1 | -1.8 | 139.1 | -1.8 | --- | --- | --- | --- |
| 25 | 68.8 | -4.4 | --- | --- | 140.6 | -4.3 | 140.6 | -4.3 | --- | --- | --- | --- |
| 26 | 68.8 | -4.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 70.3 | -2.4 | --- | --- | 140.6 | -1.5 | 140.6 | -1.5 | --- | --- | --- | --- |
| 28 | 70.3 | -4.1 | --- | --- | --- | --- | --- | --- | 175.0 | -6.4 | 232.8 | -10.4 |
| 29 | 70.3 | -4.3 | --- | --- | 140.6 | -9.5 | 140.6 | -9.5 | --- | --- | --- | --- |
| 30 | 70.3 | -3.4 | --- | --- | 142.2 | -8.2 | 142.2 | -8.2 | --- | --- | 232.8 | -9.6 |
| 31 | 70.3 | -0.6 | --- | --- | 142.2 | -8.5 | 142.2 | -8.5 | --- | --- | 232.8 | -9.6 |
| 32 | 70.3 | -7.6 | --- | --- | 140.6 | -10.1 | 140.6 | -10.1 | --- | --- | --- | --- |
| 33 | 68.8 | -4.8 | --- | --- | 140.6 | -1.5 | 140.6 | -1.5 | --- | --- | --- | --- |
| 34 | --- | --- | 89.1 | -1.6 | 140.6 | -5.3 | 140.6 | -5.3 | --- | --- | 232.8 | -10.0 |
| 35 | 70.3 | -4.9 | --- | --- | 140.6 | -7.5 | 140.6 | -7.5 | --- | --- | --- | --- |
| 36 | --- | --- | --- | --- | 139.1 | -1.7 | 139.1 | -1.7 | --- | --- | --- | --- |
| 37 | 68.8 | -3.2 | --- | --- | 139.1 | -2.7 | 139.1 | -2.7 | --- | --- | --- | --- |
| 38 | 68.8 | -5.6 | --- | --- | 139.1 | -2.3 | 139.1 | -2.3 | --- | --- | --- | --- |
| 39 | 68.8 | -3.2 | --- | --- | 139.1 | -4.3 | 139.1 | -4.3 | --- | --- | --- | -- |
| 40 | 71.9 | -0.3 | --- | --- | 142.2 | -4.5 | 142.2 | -4.5 | --- | --- | --- | --- |
| 41 | 70.3 | -1.0 | --- | --- | 140.6 | -3.4 | 140.6 | -3.4 | --- | --- | 232.8 | -10.1 |
| 42 | 70.3 | -0.8 | --- | --- | 142.2 | -5.4 | 142.2 | -5.4 | --- | --- | --- | -- |
| 43 | 70.3 | -3.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 44 | 70.3 | -2.7 | --- | --- | 140.6 | -7.7 | 140.6 | -7.7 | --- | --- | 232.8 | -10.3 |
| 45 | 70.3 | -3.3 | --- | --- | 142.2 | -8.3 | 142.2 | -8.3 | --- | --- | --- | --- |
| 46 | --- | --- | -- | --- | 139.1 | -4.7 | 139.1 | -4.7 | --- | -- | 232.8 | -8.7 |
| 47 | 68.8 | -4.5 | --- | --- | 140.6 | -2.1 | 140.6 | -2.1 | --- | --- | 232.8 | -9.0 |
| 48 | 70.3 | -7.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 49 | 70.3 | -9.8 | --- | --- | 139.1 | -6.1 | 139.1 | -6.1 | --- | --- | --- | --- |
| $\mathrm{ft}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 69.7 | -3.7 | 96.4 | -10.4 | 139.5 | -4.1 | 139.5 | -4.1 | 175.0 | -15.7 | 232.8 | -14.4 |
| $\mathrm{L}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |
| dLa,k[dB] |  | -1.7 |  | -8.4 |  | -2.1 |  | -2.1 |  | -13.6 |  | -12.3 |
| $\mathrm{K}_{\text {тn }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

2

## BIN 8: Narrowband spectrum



BIN 8: Narrowband spectrum


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| BIN 8.5: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | $\mathrm{L}_{\text {pr,avg, }, \mathrm{k}}$ | $L_{\text {pt, }, \text {, }}$ | Lpn,j,k | $\mathrm{dL}_{\text {tn, }, \mathrm{j} \text { k }}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dL ${ }_{\text {t1, 1, }, \text { 5 }}$ : | 73.4 | 1.56 | 24.0 | 38.9 | 40.3 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t1, 2, }, \text {. }}$ : | 73.4 | 1.56 | 23.7 | 38.5 | 40.0 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t} 1,3,8,5}$ : | 73.4 | 1.56 | 24.0 | 40.0 | 40.3 | -0.2 | -2.0 | 1.8 |
| $\mathrm{dL}_{\mathrm{t} 1,4,8.5}$ : | 70.3 | 1.56 | 23.0 | 38.4 | 39.3 | -0.9 | -2.0 | 1.1 |
| $\mathrm{dL}_{\mathrm{t} 1,5,8,5}$ : | 70.3 | 1.56 | 23.6 | 39.0 | 39.9 | -0.9 | -2.0 | 1.1 |
| dLti,6,8.5: | 73.4 | 1.56 | 24.8 | 38.8 | 41.1 | -2.4 | -2.0 | -0.4 |
| $\mathrm{dL}_{\mathrm{t} 1,7,8,5}$ | 70.3 | 1.56 | 22.8 | 39.6 | 39.1 | 0.5 | -2.0 | 2.5 |
| $\mathrm{dL}_{\mathrm{t} 1,8,8,5}$ | 70.3 | 1.56 | 24.0 | 38.8 | 40.3 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t} 1,9,8.5}$ : | 68.8 | 1.56 | 25.4 | 37.0 | 41.7 | -4.7 | -2.0 | -2.7 |
| dL $\mathrm{Lt}_{\text {ti,10,8.5 }}$ : | 70.3 | 1.56 | 24.6 | 38.3 | 40.9 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{Lt}_{1,11,8.5}$ | 70.3 | 1.56 | 23.3 | 38.0 | 39.6 | -1.6 | -2.0 | 0.4 |
| dL $\mathrm{ta}, 12,8.5$ | 73.4 | 1.56 | 24.5 | 39.3 | 40.8 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\text {ti, } 13,8.5}$ : | 70.3 | 1.56 | 24.2 | 38.1 | 40.5 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{Lt}_{\text {t1,14,8.5: }}$ | 70.3 | 1.56 | 25.6 | 36.4 | 41.9 | -5.5 | -2.0 | -3.5 |
| $\mathrm{dL}_{\text {t1, } 15,8.5}$ : | 70.3 | 1.56 | 25.7 | 37.0 | 42.0 | -5.0 | -2.0 | -3.0 |
| dLtit,16,8.5: | 70.3 | 1.56 | 25.1 | 37.3 | 41.4 | -4.1 | -2.0 | -2.1 |
| $\mathrm{dL}_{\text {t1, 17,8.5: }}$ | 70.3 | 1.56 | 25.8 | 39.2 | 42.1 | -3.0 | -2.0 | -1.0 |
| dL $\mathrm{Lt}_{1,18,8.5} \mathrm{~L}^{\text {a }}$ | 73.4 | 1.56 | 23.5 | 39.9 | 39.8 | 0.1 | -2.0 | 2.1 |
| dL $\mathrm{Lt}_{11,19,8.5}$ | 73.4 | 1.56 | 24.8 | 38.6 | 41.1 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{\text {ti, } 20,8.5}$ : | 73.4 | 1.56 | 25.5 | 39.3 | 41.8 | -2.6 | -2.0 | -0.5 |
| $\mathrm{dL}_{\text {t1, } 21,8.5}$ : | 70.3 | 1.56 | 25.8 | 37.5 | 42.1 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{11,22,8.5}$ | 70.3 | 1.56 | 24.8 | 39.6 | 41.1 | -1.6 | -2.0 | 0.5 |
| dLti,23,8.5: | 71.9 | 1.56 | 24.5 | 39.9 | 40.8 | -0.8 | -2.0 | 1.2 |
| dLtil,25,8.5: | 73.4 | 1.56 | 24.4 | 39.4 | 40.7 | -1.2 | -2.0 | 0.8 |
| dL $\mathrm{Lt}_{\text {t1, } 26,8.5}$ : | 73.4 | 1.56 | 24.6 | 39.2 | 41.0 | -1.7 | -2.0 | 0.3 |
| dL $\mathrm{Lt}_{1,27,8.5}$ | 70.3 | 1.56 | 25.3 | 40.3 | 41.6 | -1.3 | -2.0 | 0.7 |
| dL ${ }_{\text {t1, } 28,8.5}$ : | 67.2 | 1.56 | 24.8 | 33.1 | 41.1 | -8.0 | -2.0 | -6.0 |
| d $\mathrm{Lt}_{\text {t1, } 29,8.5}$ : | 67.2 | 1.56 | 25.6 | 32.6 | 41.8 | -9.2 | -2.0 | -7.2 |
| dL $\mathrm{Lt} 1,30,8.5$ | 70.3 | 1.56 | 26.6 | 39.2 | 42.9 | -3.7 | -2.0 | -1.7 |
| $\mathrm{dL}_{\text {t1, } 31,8.5}$ : | 70.3 | 1.56 | 24.2 | 36.7 | 40.5 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\text {t1, } 32,8.5}$ : | 70.3 | 1.56 | 23.8 | 37.0 | 40.1 | -3.0 | -2.0 | -1.0 |
| dL $\mathrm{Lt}_{1,33,8.5}$ : | 70.3 | 1.56 | 24.1 | 38.6 | 40.4 | -1.8 | -2.0 | 0.2 |
| dLtil,34,8.5: | 70.3 | 1.56 | 24.6 | 38.8 | 40.9 | -2.0 | -2.0 | 0.0 |
| $\mathrm{dL}_{11,35,8.5}$ | 70.3 | 1.56 | 25.3 | 39.0 | 41.6 | -2.5 | -2.0 | -0.5 |
|  | 70.3 | 1.56 | 25.1 | 39.6 | 41.4 | -1.8 | -2.0 | 0.2 |
| dLtil,37,8.5: | 70.3 | 1.56 | 26.3 | 39.6 | 42.6 | -3.0 | -2.0 | -1.0 |
| $\mathrm{dL}_{\text {t1, } 38,8.5}$ : | 70.3 | 1.56 | 25.4 | 37.8 | 41.7 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{11,40,8.5}$ | 70.3 | 1.56 | 26.4 | 36.6 | 42.7 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {t1, 41,8.5: }}$ | 73.4 | 1.56 | 26.4 | 38.4 | 42.7 | -4.2 | -2.0 | -2.2 |
| d $\mathrm{Lt}_{11,42,8.5}$ | 70.3 | 1.56 | 24.1 | 38.5 | 40.4 | -1.9 | -2.0 | 0.1 |
| dL $\mathrm{Lt}, 43,8.5$ | 70.3 | 1.56 | 24.0 | 38.1 | 40.3 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\text {t1, 44,8.5: }}$ | 70.3 | 1.56 | 23.6 | 39.0 | 39.9 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{\text {t1, 45,8.5 }}$ | 71.9 | 1.56 | 25.9 | 39.7 | 42.2 | -2.4 | -2.0 | -0.4 |
| $\mathrm{dL}_{\text {t1, 46,8.5 }}$ | 68.8 | 1.56 | 25.0 | 34.0 | 41.3 | -7.3 | -2.0 | -5.3 |
| dLti,47,8.5: | 70.3 | 1.56 | 24.4 | 37.1 | 40.7 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\text {t1, 48,8.5 }}$ | 70.3 | 1.56 | 25.2 | 38.3 | 41.5 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\text {t1, 49,8.5 }}$ | 70.3 | 1.56 | 26.1 | 39.1 | 42.4 | -3.3 | -2.0 | -1.3 |
| dLti,50,8.5: | 70.3 | 1.56 | 25.7 | 38.4 | 42.0 | -3.7 | -2.0 | -1.7 |
| dL $\mathrm{tal}, 51,8.5$ | 70.3 | 1.56 | 26.4 | 36.5 | 42.7 | -6.2 | -2.0 | -4.2 |
| dL $\mathrm{Lt}_{1,52,8.5}$ | 70.3 | 1.56 | 26.2 | 39.7 | 42.5 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{t1}, 53,$, | 70.3 | 1.56 | 25.9 | 38.7 | 42.2 | -3.5 | -2.0 | -1.5 |

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| $\mathrm{dL}_{\mathrm{t} 1,54,8.5}$ : | 70.3 | 1.56 | 26.6 | 39.7 | 42.9 | -3.2 | -2.0 | -1.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLti,55,8.5: | 71.9 | 1.56 | 26.4 | 38.3 | 42.7 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\mathrm{t} 1,56,8.5}$ : | 70.3 | 1.56 | 25.0 | 38.1 | 41.3 | -3.1 | -2.0 | -1.1 |
| dLti,57,8.5: | 73.4 | 1.56 | 26.2 | 37.8 | 42.5 | -4.7 | -2.0 | -2.7 |
| dL $\mathrm{t}_{11,58,8,5}$ | 68.8 | 1.56 | 27.3 | 33.6 | 43.5 | -9.9 | -2.0 | -7.9 |
| $\mathrm{dL}_{\mathrm{t} 1,59,8.5}$ : | 70.3 | 1.56 | 27.0 | 37.3 | 43.3 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\mathrm{t} 2,1,8.5}$ : | 73.4 | 1.56 | 24.0 | 38.9 | 40.3 | -1.4 | -2.0 | 0.6 |
| dL ${ }_{\text {t2, } 2,8.5}$ : | 73.4 | 1.56 | 23.7 | 38.5 | 40.0 | -1.5 | -2.0 | 0.5 |
| dL $\mathrm{L}_{\mathrm{t}, 3,3.5}$ : | 73.4 | 1.56 | 24.0 | 40.0 | 40.3 | -0.2 | -2.0 | 1.8 |
| dL ${ }_{\text {t2, } 2,8.5}$ : | 73.4 | 1.56 | 24.8 | 38.8 | 41.1 | -2.4 | -2.0 | -0.4 |
| $\mathrm{dL}_{\mathrm{t} 2,12,8.5}$ : | 73.4 | 1.56 | 24.5 | 39.3 | 40.8 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t} 2,18,8.5}$ : | 73.4 | 1.56 | 23.5 | 39.9 | 39.8 | 0.1 | -2.0 | 2.1 |
| dL $\mathrm{L}_{\mathrm{t}, 1,19,8.5}$ | 73.4 | 1.56 | 24.8 | 38.6 | 41.1 | -2.5 | -2.0 | -0.5 |
| dL $\mathrm{L}_{\text {L2,20,8.5: }}$ | 73.4 | 1.56 | 25.5 | 39.3 | 41.8 | -2.6 | -2.0 | -0.5 |
| $\mathrm{dL}_{\mathrm{t} 2,23,8.5}$ : | 71.9 | 1.56 | 24.5 | 39.9 | 40.8 | -0.8 | -2.0 | 1.2 |
| dL $\mathrm{L}_{\mathrm{t} 2,24,8.5}$ : | 90.6 | 1.56 | 25.1 | 43.4 | 41.4 | 2.0 | -2.0 | 4.0 |
| dL ${ }_{\text {t2,25, }, .5}$ : | 73.4 | 1.56 | 24.4 | 39.4 | 40.7 | -1.2 | -2.0 | 0.8 |
| dL ${ }_{\text {t2, } 26,8,5}$ : | 73.4 | 1.56 | 24.6 | 39.2 | 41.0 | -1.7 | -2.0 | 0.3 |
| dL $\mathrm{L}_{\mathrm{t}, 41,8,5 \text { : }}$ | 73.4 | 1.56 | 26.4 | 38.4 | 42.7 | -4.2 | -2.0 | -2.2 |
| dL ${ }_{\text {t2,45, }, .5}$ : | 71.9 | 1.56 | 25.9 | 39.7 | 42.2 | -2.4 | -2.0 | -0.4 |
| dL ${ }_{\text {t2, }, 55,8.5}$ : | 71.9 | 1.56 | 26.4 | 38.3 | 42.7 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\text {t2, } 27,8,5}$ : | 73.4 | 1.56 | 26.2 | 37.8 | 42.5 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t} 3,1,8.5}$ : | 143.8 | 1.56 | 27.5 | 40.9 | 43.8 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t} 3,2,8.5}$ : | 142.2 | 1.56 | 26.7 | 38.6 | 43.0 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\text {t3, }}$, 8.5 : | 143.8 | 1.56 | 27.2 | 37.3 | 43.5 | -6.2 | -2.0 | -4.2 |
| dL ${ }_{\text {t } 3,4,8.5}$ : | 142.2 | 1.56 | 26.7 | 41.1 | 43.0 | -1.9 | -2.0 | 0.2 |
|  | 142.2 | 1.56 | 26.9 | 41.4 | 43.2 | -1.8 | -2.0 | 0.2 |
| dL ${ }_{\text {t3, } 6,8.5}$ : | 142.2 | 1.56 | 28.0 | 38.2 | 44.3 | -6.1 | -2.0 | -4.1 |
| dL $\mathrm{d}_{\mathrm{t}, 7,8.5}$ : | 142.2 | 1.56 | 26.7 | 44.2 | 43.0 | 1.2 | -2.0 | 3.2 |
| dL ${ }_{\text {t } 3,8,8,5}$ : | 142.2 | 1.56 | 27.3 | 40.3 | 43.6 | -3.3 | -2.0 | -1.3 |
| dL ${ }_{\text {t } 3,9,8.5}$ : | 140.6 | 1.56 | 28.3 | 40.4 | 44.6 | -4.1 | -2.0 | -2.1 |
| dL ${ }_{\text {t }}$,10,8.5: | 142.2 | 1.56 | 27.2 | 39.9 | 43.5 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {t } 3,11,8.5}$ : | 140.6 | 1.56 | 26.4 | 40.7 | 42.7 | -2.0 | -2.0 | 0.1 |
| dL $\mathrm{d}_{\mathrm{t}, 12,8.5}$ : | 142.2 | 1.56 | 27.3 | 41.0 | 43.6 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{L}_{\mathrm{t}, 13,8.5}$ : | 140.6 | 1.56 | 27.6 | 42.9 | 43.9 | -1.0 | -2.0 | 1.1 |
| dL ${ }_{\text {t } 3,14,8.5}$ | 140.6 | 1.56 | 28.1 | 43.3 | 44.4 | -1.1 | -2.0 | 0.9 |
| dL ${ }_{\text {t } 3,15,8.5}$ : | 140.6 | 1.56 | 28.0 | 43.9 | 44.3 | -0.4 | -2.0 | 1.6 |
| dL ${ }_{\text {t }}^{\text {d,16,8.5: }}$ | 142.2 | 1.56 | 27.7 | 41.2 | 44.0 | -2.8 | -2.0 | -0.7 |
| dL ${ }_{\text {t } 3,17,8.5}$ : | 142.2 | 1.56 | 28.3 | 42.7 | 44.6 | -2.0 | -2.0 | 0.0 |
| dL ${ }_{\text {t } 3,18,8.5}$ : | 142.2 | 1.56 | 27.0 | 40.9 | 43.3 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{L}_{\mathrm{t}, 19,8.5}$ | 142.2 | 1.56 | 27.8 | 39.4 | 44.1 | -4.7 | -2.0 | -2.7 |
| dL $\mathrm{L}_{\mathrm{t}, 20,8.5}$ : | 142.2 | 1.56 | 27.9 | 39.6 | 44.2 | -4.6 | -2.0 | -2.6 |
| dL $\mathrm{L}_{\mathrm{t}, 21,8.5}$ : | 140.6 | 1.56 | 28.0 | 43.5 | 44.3 | -0.8 | -2.0 | 1.2 |
| dL ${ }_{\text {t } 3,22,8.5}$ | 142.2 | 1.56 | 28.2 | 44.1 | 44.5 | -0.4 | -2.0 | 1.7 |
| dL $\mathrm{d}_{\mathrm{t}, 23,8,5}$ | 142.2 | 1.56 | 28.0 | 41.9 | 44.3 | -2.3 | -2.0 | -0.3 |
| dL $\mathrm{d}_{\mathrm{t}, 24,8.5}$ | 140.6 | 1.56 | 26.7 | 44.8 | 43.0 | 1.7 | -2.0 | 3.8 |
| dL ${ }_{\text {t } 3,25,8.5}$ : | 142.2 | 1.56 | 27.5 | 38.9 | 43.9 | -5.0 | -2.0 | -2.9 |
| dL $\mathrm{L}_{\mathrm{t}, 26,8.5}$ : | 142.2 | 1.56 | 27.7 | 43.6 | 44.0 | -0.4 | -2.0 | 1.6 |
| dL $\mathrm{d}_{\mathrm{t}, 27,8,5}$ | 142.2 | 1.56 | 28.1 | 44.1 | 44.4 | -0.3 | -2.0 | 1.7 |
| dL $\mathrm{L}_{\mathrm{t}, 28,8,5}$ : | 134.4 | 1.56 | 28.4 | 42.0 | 44.7 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{L}_{\mathrm{t}, 29,8.5}$ : | 135.9 | 1.56 | 29.3 | 37.1 | 45.6 | -8.6 | -2.0 | -6.6 |
| dL $\mathrm{L}_{\mathrm{t}, 3,3,8.5}$ | 140.6 | 1.56 | 29.3 | 39.8 | 45.6 | -5.8 | -2.0 | -3.7 |
| dL $\mathrm{L}_{\mathrm{t}, 31,8,5.5}$ | 140.6 | 1.56 | 27.7 | 42.0 | 44.0 | -2.0 | -2.0 | 0.0 |
| dL ${ }_{\text {t3,32,8.5: }}$ | 140.6 | 1.56 | 27.7 | 42.6 | 44.0 | -1.4 | -2.0 | 0.7 |

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| $\mathrm{dL}_{\mathrm{t} 3,33,8.5}$ : | 142.2 | 1.56 | 28.1 | 42.4 | 44.4 | -2.0 | -2.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL $\mathrm{L}_{\mathrm{t}, 34,8.5}$ : | 140.6 | 1.56 | 27.7 | 42.3 | 44.0 | -1.7 | -2.0 | 0.3 |
| $\mathrm{dL}_{\mathrm{t} 3,35,8.5}$ : | 142.2 | 1.56 | 28.3 | 39.0 | 44.6 | -5.6 | -2.0 | -3.6 |
| dLt3,36,8.5: | 142.2 | 1.56 | 28.5 | 42.1 | 44.8 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{L}_{\mathrm{t}, 37,8,5 \text { : }}$ | 140.6 | 1.56 | 29.4 | 39.8 | 45.7 | -5.9 | -2.0 | -3.9 |
| dL $\mathrm{L}_{\mathrm{t}, 38,8.5}$ : | 140.6 | 1.56 | 28.4 | 42.1 | 44.7 | -2.6 | -2.0 | -0.6 |
| dL ${ }_{\text {t3,39, }, .5}$ : | 140.6 | 1.56 | 27.5 | 43.9 | 43.8 | 0.1 | -2.0 | 2.1 |
| dL $\mathrm{L}_{\mathrm{t}, 40,8,5}$ : | 140.6 | 1.56 | 29.6 | 42.3 | 45.9 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {t } 3,42,8.5}$ | 140.6 | 1.56 | 27.8 | 41.8 | 44.1 | -2.3 | -2.0 | -0.3 |
| dL $\mathrm{d}_{\mathrm{t}, 43,8.5}$ : | 142.2 | 1.56 | 27.7 | 39.1 | 44.0 | -4.9 | -2.0 | -2.9 |
| dL $\mathrm{L}_{\mathrm{t}, 44,8.5}$ | 143.8 | 1.56 | 27.3 | 38.9 | 43.6 | -4.8 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t} 3,45,8.5}$ : | 143.8 | 1.56 | 29.0 | 44.9 | 45.3 | -0.4 | -2.0 | 1.6 |
| $\mathrm{dL}_{\mathrm{t}, 46,8,5}$ : | 139.1 | 1.56 | 29.3 | 41.9 | 45.6 | -3.7 | -2.0 | -1.7 |
| dL $\mathrm{L}_{\mathrm{t}, 47,8.5}$ | 142.2 | 1.56 | 28.2 | 37.6 | 44.5 | -6.8 | -2.0 | -4.8 |
| dL $\mathrm{L}_{\mathrm{t}, 48,8.5}$ | 142.2 | 1.56 | 28.7 | 40.5 | 45.0 | -4.5 | -2.0 | -2.5 |
| dL $\mathrm{d}_{\mathrm{t}, 49,8.5}$ | 140.6 | 1.56 | 29.3 | 39.3 | 45.6 | -6.3 | -2.0 | -4.3 |
| dL ${ }_{\text {t3,50, }, .5}$ : | 142.2 | 1.56 | 29.5 | 44.8 | 45.8 | -1.0 | -2.0 | 1.0 |
| dL $\mathrm{d}_{\mathrm{t}, 51,8.5}$ : | 140.6 | 1.56 | 29.3 | 41.9 | 45.6 | -3.7 | -2.0 | -1.7 |
| dL $\mathrm{L}_{\mathrm{t}, 52,8,5}$ | 142.2 | 1.56 | 29.2 | 38.8 | 45.5 | -6.7 | -2.0 | -4.7 |
| dL ${ }_{\text {t3,53,8.5 }}$ : | 140.6 | 1.56 | 29.6 | 42.4 | 45.9 | -3.5 | -2.0 | -1.4 |
| dL $\mathrm{L}_{\mathrm{t}, 54,8.5}$ : | 142.2 | 1.56 | 29.5 | 42.9 | 45.8 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{d}_{\mathrm{t}, 55,8.5}$ | 140.6 | 1.56 | 29.4 | 43.0 | 45.7 | -2.7 | -2.0 | -0.6 |
| dL ${ }_{\text {t3,56,8.5 }}$ : | 140.6 | 1.56 | 28.6 | 41.4 | 44.9 | -3.5 | -2.0 | -1.5 |
| dL $\mathrm{d}_{\mathrm{t}, 57,8,5 \text { : }}$ | 143.8 | 1.56 | 28.7 | 39.9 | 45.0 | -5.1 | -2.0 | -3.1 |
| $\mathrm{dL}_{\mathrm{t}, 58,8,5}$ : | 140.6 | 1.56 | 30.5 | 40.9 | 46.8 | -5.8 | -2.0 | -3.8 |
| dL $\mathrm{d}_{\mathrm{t}, 59,8.5}$ : | 140.6 | 1.56 | 30.0 | 38.1 | 46.3 | -8.3 | -2.0 | -6.2 |
| dL ${ }_{\text {t } 4,41,8,5}$ | 175.0 | 1.56 | 29.0 | 36.6 | 45.3 | -8.7 | -2.0 | -6.6 |
| dL ${ }_{\text {t } 5,31,8.5}$ : | 232.8 | 1.56 | 27.9 | 34.6 | 44.3 | -9.7 | -2.1 | -7.6 |
| dL ${ }_{\text {t } 5,32,8,5}$ : | 232.8 | 1.56 | 28.0 | 34.1 | 44.4 | -10.4 | -2.1 | -8.3 |
| dL ${ }_{\text {t5,34,8.5 }}$ : | 232.8 | 1.56 | 28.0 | 34.5 | 44.4 | -9.9 | -2.1 | -7.8 |
| dLt5,37,8.5: | 232.8 | 1.56 | 28.5 | 34.5 | 44.9 | -10.4 | -2.1 | -8.3 |
| dL ${ }_{\text {t } 5,54,8,5:}$ | 232.8 | 1.56 | 28.7 | 34.8 | 45.1 | -10.4 | -2.1 | -8.3 |
| dL $\mathrm{t}_{\text {6,31,8.5: }}$ | 309.4 | 1.56 | 27.2 | 37.2 | 43.8 | -6.6 | -2.1 | -4.5 |
| dL $\mathrm{dt}_{6,33,8.5}$ : | 307.8 | 1.56 | 27.8 | 35.6 | 44.3 | -8.7 | -2.1 | -6.6 |
| dL $\mathrm{d}_{\text {t }, 37,8.5}$ : | 309.4 | 1.56 | 28.2 | 35.8 | 44.7 | -8.9 | -2.1 | -6.8 |
| dLti,38,8.5: | 307.8 | 1.56 | 27.7 | 38.3 | 44.3 | -6.0 | -2.1 | -3.9 |
| dL ${ }_{\text {t7,31,8.5: }}$ | 8020.8 | 1.56 | -16.6 | -10.5 | 12.7 | -23.3 | -5.0 | -18.3 |

BIN 8.5: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j} \text { k }}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | dL ${ }_{\text {tr, }, \text {, }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 73.4 | -1.4 | 73.4 | -1.4 | 143.8 | -2.9 | --- | --- | --- | --- | --- | --- |
| 2 | 73.4 | -1.5 | 73.4 | -1.5 | 142.2 | -4.4 | --- | --- | --- | --- | --- | --- |
| 3 | 73.4 | -0.2 | 73.4 | -0.2 | 143.8 | -6.2 | --- | --- | --- | --- | --- | --- |
| 4 | 70.3 | -0.9 | --- | --- | 142.2 | -1.9 | --- | --- | --- | --- | --- | --- |
| 5 | 70.3 | -0.9 | --- | --- | 142.2 | -1.8 | --- | --- | --- | --- | --- | --- |
| 6 | 73.4 | -2.4 | 73.4 | -2.4 | 142.2 | -6.1 | --- | --- | --- | --- | --- | --- |
| 7 | 70.3 | 0.5 | --- | --- | 142.2 | 1.2 | --- | --- | --- | --- | --- | --- |
| 8 | 70.3 | -1.5 | --- | --- | 142.2 | -3.3 | --- | --- | --- | --- | --- | --- |
| 9 | 68.8 | -4.7 | --- | --- | 140.6 | -4.1 | --- | --- | --- | --- | --- | --- |
| 10 | 70.3 | -2.6 | --- | --- | 142.2 | -3.6 | --- | --- | --- | --- | --- | --- |
| 11 | 70.3 | -1.6 | --- | --- | 140.6 | -2.0 | --- | --- | --- | --- | --- | --- |
| 12 | 73.4 | -1.5 | 73.4 | -1.5 | 142.2 | -2.6 | --- | --- | --- | --- | --- | --- |

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| 13 | 70.3 | -2.4 | --- | --- | 140.6 | -1.0 | --- | --- | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | 70.3 | -5.5 | --- | --- | 140.6 | -1.1 | --- | --- | --- | --- | --- | -- |
| 15 | 70.3 | -5.0 | --- | --- | 140.6 | -0.4 | --- | --- | --- | --- | --- | --- |
| 16 | 70.3 | -4.1 | --- | --- | 142.2 | -2.8 | --- | --- | --- | --- | --- | --- |
| 17 | 70.3 | -3.0 | --- | --- | 142.2 | -2.0 | --- | --- | --- | --- | --- | --- |
| 18 | 73.4 | 0.1 | 73.4 | 0.1 | 142.2 | -2.4 | --- | --- | --- | --- | --- | --- |
| 19 | 73.4 | -2.5 | 73.4 | -2.5 | 142.2 | -4.7 | --- | --- | --- | --- | --- | --- |
| 20 | 73.4 | -2.6 | 73.4 | -2.6 | 142.2 | -4.6 | --- | --- | --- | --- | --- | --- |
| 21 | 70.3 | -4.6 | --- | --- | 140.6 | -0.8 | --- | --- | --- | --- | --- | --- |
| 22 | 70.3 | -1.6 | --- | --- | 142.2 | -0.4 | --- | --- | --- | --- | --- | --- |
| 23 | 71.9 | -0.8 | 71.9 | -0.8 | 142.2 | -2.3 | --- | --- | --- | --- | --- | --- |
| 24 | --- | --- | 90.6 | 2.0 | 140.6 | 1.7 | --- | --- | --- | --- | --- | -- |
| 25 | 73.4 | -1.2 | 73.4 | -1.2 | 142.2 | -5.0 | --- | --- | --- | --- | --- | --- |
| 26 | 73.4 | -1.7 | 73.4 | -1.7 | 142.2 | -0.4 | --- | --- | --- | --- | --- | --- |
| 27 | 70.3 | -1.3 | --- | --- | 142.2 | -0.3 | --- | --- | --- | --- | --- | --- |
| 28 | 67.2 | -8.0 | --- | --- | 134.4 | -2.7 | --- | --- | --- | --- | --- | --- |
| 29 | 67.2 | -9.2 | --- | --- | 135.9 | -8.6 | --- | --- | --- | --- | --- | --- |
| 30 | 70.3 | -3.7 | --- | --- | 140.6 | -5.8 | --- | --- | --- | --- | --- | --- |
| 31 | 70.3 | -3.8 | --- | --- | 140.6 | -2.0 | --- | --- | 232.8 | -9.7 | 309.4 | -6.6 |
| 32 | 70.3 | -3.0 | --- | --- | 140.6 | -1.4 | --- | --- | 232.8 | -10.4 | --- | --- |
| 33 | 70.3 | -1.8 | --- | --- | 142.2 | -2.0 | --- | --- | --- | --- | 307.8 | -8.7 |
| 34 | 70.3 | -2.0 | --- | --- | 140.6 | -1.7 | --- | --- | 232.8 | -9.9 | --- | --- |
| 35 | 70.3 | -2.5 | --- | --- | 142.2 | -5.6 | --- | --- | --- | --- | --- | --- |
| 36 | 70.3 | -1.8 | --- | --- | 142.2 | -2.7 | --- | --- | --- | --- | --- | --- |
| 37 | 70.3 | -3.0 | --- | --- | 140.6 | -5.9 | --- | --- | 232.8 | -10.4 | 309.4 | -8.9 |
| 38 | 70.3 | -3.9 | --- | --- | 140.6 | -2.6 | --- | --- | --- | --- | 307.8 | -6.0 |
| 39 | --- | --- | -- | --- | 140.6 | 0.1 | --- | --- | --- | --- | --- | --- |
| 40 | 70.3 | -6.1 | --- | --- | 140.6 | -3.6 | --- | --- | --- | --- | --- | --- |
| 41 | 73.4 | -4.2 | 73.4 | -4.2 | --- | --- | 175.0 | -8.7 | --- | --- | --- | --- |
| 42 | 70.3 | -1.9 | --- | --- | 140.6 | -2.3 | --- | --- | --- | --- | --- | --- |
| 43 | 70.3 | -2.1 | --- | --- | 142.2 | -4.9 | --- | --- | -- | --- | --- | --- |
| 44 | 70.3 | -1.0 | --- | --- | 143.8 | -4.8 | --- | --- | --- | --- | --- | --- |
| 45 | 71.9 | -2.4 | 71.9 | -2.4 | 143.8 | -0.4 | --- | --- | --- | --- | --- | --- |
| 46 | 68.8 | -7.3 | --- | --- | 139.1 | -3.7 | --- | --- | --- | --- | --- | --- |
| 47 | 70.3 | -3.6 | --- | --- | 142.2 | -6.8 | -- | --- | --- | --- | --- | --- |
| 48 | 70.3 | -3.3 | --- | --- | 142.2 | -4.5 | --- | --- | --- | --- | --- | --- |
| 49 | 70.3 | -3.3 | -- | --- | 140.6 | -6.3 | --- | --- | --- | --- | --- | --- |
| 50 | 70.3 | -3.7 | --- | --- | 142.2 | -1.0 | --- | --- | -- | --- | --- | --- |
| 51 | 70.3 | -6.2 | --- | --- | 140.6 | -3.7 | --- | --- | --- | --- | --- | --- |
| 52 | 70.3 | -2.8 | --- | --- | 142.2 | -6.7 | --- | --- | --- | --- | --- | --- |
| 53 | 70.3 | -3.5 | --- | --- | 140.6 | -3.5 | --- | --- | --- | --- | --- | --- |
| 54 | 70.3 | -3.2 | --- | --- | 142.2 | -2.8 | --- | --- | 232.8 | -10.4 | --- | --- |
| 55 | 71.9 | -4.4 | 71.9 | -4.4 | 140.6 | -2.7 | --- | --- | --- | --- | --- | --- |
| 56 | 70.3 | -3.1 | --- | --- | 140.6 | -3.5 | --- | --- | --- | --- | --- | --- |
| 57 | 73.4 | -4.7 | 73.4 | -4.7 | 143.8 | -5.1 | --- | --- | --- | --- | --- | --- |
| 58 | 68.8 | -9.9 | --- | --- | 140.6 | -5.8 | --- | --- | --- | --- | --- | --- |
| 59 | 70.3 | -6.0 | --- | --- | 140.6 | -8.3 | --- | --- | --- | --- | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL} \mathrm{k}_{\mathrm{k}}[\mathrm{dB}]$ | 70.9 | -2.9 | 85.9 | -6.8 | 141.5 | -2.7 | 175.0 | -16.0 | 232.8 | -15.4 | 309.3 | -14.8 |
| $\mathrm{L}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -0.9 |  | -4.8 |  | -0.7 |  | -14.0 |  | -13.3 |  | -12.7 |
| $\mathrm{K}_{\text {TN }}[\mathrm{dB}]$ |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |



BIN 8.5: Narrowband spectrum


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| BIN 9: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta $f$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{avg}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{j}, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dLtil, ${ }^{\text {a }}$ | 70.3 | 1.56 | 23.3 | 39.2 | 39.6 | -0.4 | -2.0 | 1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,2,9}$ | 70.3 | 1.56 | 23.5 | 39.5 | 39.8 | -0.3 | -2.0 | 1.7 |
| $\mathrm{dL}_{\mathrm{t} 1,3,9}$ : | 70.3 | 1.56 | 22.5 | 38.7 | 38.8 | 0.0 | -2.0 | 2.0 |
| $\mathrm{dL}_{\mathrm{t} 1,4,9}$ | 70.3 | 1.56 | 23.1 | 38.7 | 39.4 | -0.7 | -2.0 | 1.3 |
| $\mathrm{dL}_{\mathrm{t} 1,5,9}$ : | 70.3 | 1.56 | 23.3 | 39.2 | 39.6 | -0.4 | -2.0 | 1.6 |
| dL $\mathrm{L}_{11,6,9}$ | 70.3 | 1.56 | 23.9 | 39.2 | 40.2 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{\mathrm{t} 1,7,9}$ : | 70.3 | 1.56 | 24.8 | 37.5 | 41.1 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,8,9}$ : | 73.4 | 1.56 | 25.2 | 40.7 | 41.5 | -0.8 | -2.0 | 1.2 |
| $\mathrm{dL}_{\mathrm{t} 1,9,9}$ | 70.3 | 1.56 | 24.9 | 39.7 | 41.2 | -1.5 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {ti,11,9: }}$ | 70.3 | 1.56 | 24.4 | 40.3 | 40.7 | -0.4 | -2.0 | 1.6 |
| dLti,12,9: | 70.3 | 1.56 | 24.5 | 38.9 | 40.8 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,13,9}$ : | 70.3 | 1.56 | 26.5 | 36.5 | 42.8 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\mathrm{t}_{11,14,9}}$ | 70.3 | 1.56 | 23.0 | 38.8 | 39.3 | -0.5 | -2.0 | 1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,15,9}$ | 70.3 | 1.56 | 23.9 | 38.5 | 40.2 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,16,9}$ : | 70.3 | 1.56 | 24.7 | 40.9 | 41.0 | -0.1 | -2.0 | 1.9 |
| dL $\mathrm{Lt} 117,9$ | 73.4 | 1.56 | 23.3 | 40.2 | 39.6 | 0.5 | -2.0 | 2.5 |
| $\mathrm{dL}_{\mathrm{t} 1,18,9}$ | 71.9 | 1.56 | 25.9 | 39.5 | 42.2 | -2.7 | -2.0 | -0.7 |
| dLti1,19,9: | 67.2 | 1.56 | 25.1 | 35.3 | 41.3 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\text {L1,21,9: }}$ | 70.3 | 1.56 | 24.8 | 40.3 | 41.1 | -0.8 | -2.0 | 1.2 |
| $\mathrm{dL}_{\mathrm{t} 1,22,9}$ : | 70.3 | 1.56 | 23.4 | 39.9 | 39.7 | 0.2 | -2.0 | 2.2 |
| $\mathrm{dL}_{\mathrm{t}_{1,23,9}}$ | 70.3 | 1.56 | 23.9 | 39.4 | 40.2 | -0.9 | -2.0 | 1.1 |
| $\mathrm{dL}_{\text {ti,24,9: }}$ | 70.3 | 1.56 | 26.1 | 39.4 | 42.4 | -3.0 | -2.0 | -1.0 |
| dL $\mathrm{Lt}, 25,9$ | 70.3 | 1.56 | 26.0 | 39.6 | 42.3 | -2.7 | -2.0 | -0.7 |
| $\mathrm{dL}_{\mathrm{t} 1,26,9}$ | 71.9 | 1.56 | 26.2 | 39.5 | 42.5 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t}_{11,28,9}}$ | 73.4 | 1.56 | 26.1 | 40.9 | 42.4 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\mathrm{t} 1,29,9}$ | 70.3 | 1.56 | 24.8 | 38.9 | 41.1 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,30,9}$ : | 71.9 | 1.56 | 26.7 | 39.0 | 43.0 | -4.0 | -2.0 | -2.0 |
| dLtil31,9: | 70.3 | 1.56 | 23.6 | 39.4 | 39.9 | -0.5 | -2.0 | 1.5 |
| dLtil,32,9: | 70.3 | 1.56 | 25.4 | 39.3 | 41.7 | -2.5 | -2.0 | -0.4 |
| $\mathrm{dL}_{\mathrm{t} 1,33,9}$ : | 70.3 | 1.56 | 25.4 | 39.7 | 41.7 | -2.0 | -2.0 | 0.0 |
| $\mathrm{dL}_{\text {t1, } 34,9}$ : | 68.8 | 1.56 | 24.2 | 35.3 | 40.4 | -5.1 | -2.0 | -3.1 |
| $\mathrm{dL}_{\text {L1,35,9: }}$ | 70.3 | 1.56 | 25.7 | 40.6 | 42.0 | -1.4 | -2.0 | 0.6 |
| dLti,36,9: | 70.3 | 1.56 | 26.6 | 41.2 | 42.9 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\text {L1, } 37,9}$ | 70.3 | 1.56 | 26.2 | 39.9 | 42.5 | -2.6 | -2.0 | -0.6 |
|  | 70.3 | 1.56 | 26.0 | 40.6 | 42.3 | -1.8 | -2.0 | 0.2 |
| dLtil,39,9: | 70.3 | 1.56 | 26.4 | 40.8 | 42.7 | -1.9 | -2.0 | 0.1 |
| $\mathrm{dL}_{\mathrm{t}_{1140,9}}$ | 70.3 | 1.56 | 26.2 | 39.3 | 42.5 | -3.2 | -2.0 | -1.2 |
| $\mathrm{dL}_{\mathrm{L}_{1141,9}}$ | 70.3 | 1.56 | 25.3 | 39.4 | 41.6 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,42,9}$ : | 70.3 | 1.56 | 27.0 | 38.7 | 43.3 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{\mathrm{t}_{1,43,9} \text { : }}$ | 73.4 | 1.56 | 26.7 | 39.8 | 43.0 | -3.2 | -2.0 | -1.2 |
| dLtitu4,9: | 71.9 | 1.56 | 26.4 | 40.9 | 42.7 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t}_{1,45,9}}$ | 70.3 | 1.56 | 26.1 | 39.6 | 42.4 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t} 1,46,9}$ | 73.4 | 1.56 | 26.1 | 40.9 | 42.4 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t}_{1147,9}}$ | 70.3 | 1.56 | 26.5 | 38.9 | 42.8 | -3.9 | -2.0 | -1.9 |
| dL ${ }_{\text {ti, 48,9: }}$ | 73.4 | 1.56 | 24.2 | 39.4 | 40.5 | -1.1 | -2.0 | 0.9 |
| $\mathrm{dL}_{\mathrm{t} 1,49,9}$ | 73.4 | 1.56 | 25.3 | 40.2 | 41.6 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t1,50,9: }}$ | 71.9 | 1.56 | 23.4 | 40.5 | 39.7 | 0.9 | -2.0 | 2.9 |
| dLti1,51,9: | 71.9 | 1.56 | 24.1 | 39.6 | 40.4 | -0.8 | -2.0 | 1.2 |
| dL ${ }_{\text {t1,52,9: }}$ | 71.9 | 1.56 | 25.5 | 40.2 | 41.8 | -1.6 | -2.0 | 0.4 |
| dLt1,53,9: | 71.9 | 1.56 | 25.0 | 37.5 | 41.3 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{\text {t1, 54,9: }}$ | 73.4 | 1.56 | 26.1 | 39.8 | 42.4 | -2.6 | -2.0 | -0.6 |

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| $\mathrm{dL}_{\text {t1,55,9: }}$ | 73.4 | 1.56 | 23.9 | 39.6 | 40.2 | -0.6 | -2.0 | 1.4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLt1,56,9: | 73.4 | 1.56 | 25.1 | 39.1 | 41.4 | -2.3 | -2.0 | -0.3 |
| dLt1,57,9: | 70.3 | 1.56 | 25.3 | 37.8 | 41.6 | -3.8 | -2.0 | -1.8 |
| dLt1,58,9: | 71.9 | 1.56 | 26.8 | 38.9 | 43.1 | -4.2 | -2.0 | -2.2 |
| dL $\mathrm{tax,59,9}$ | 71.9 | 1.56 | 26.5 | 39.7 | 42.8 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t} 1,61,9}$ : | 68.8 | 1.56 | 27.0 | 37.3 | 43.2 | -5.9 | -2.0 | -3.9 |
| dL $\mathrm{tIT}, 62,9$ | 70.3 | 1.56 | 26.2 | 38.7 | 42.5 | -3.8 | -2.0 | -1.8 |
| dLti,6,9: | 70.3 | 1.56 | 25.2 | 40.4 | 41.5 | -1.1 | -2.0 | 0.9 |
| dLti1,65,9: | 70.3 | 1.56 | 26.1 | 36.9 | 42.4 | -5.5 | -2.0 | -3.5 |
| dL $\mathrm{Lt}_{1,669}$ : | 70.3 | 1.56 | 27.4 | 39.8 | 43.7 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{\text {t1,67,9: }}$ | 70.3 | 1.56 | 26.5 | 39.0 | 42.8 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 1,68,9}$ | 70.3 | 1.56 | 27.0 | 39.8 | 43.3 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {t1, } 70,9}$ | 70.3 | 1.56 | 26.8 | 40.9 | 43.1 | -2.2 | -2.0 | -0.2 |
| dLti, ${ }_{\text {l1,9: }}$ | 70.3 | 1.56 | 25.5 | 37.6 | 41.8 | -4.2 | -2.0 | -2.2 |
| dL $\mathrm{Lt}_{\text {t2,10,9: }}$ | 95.3 | 1.56 | 24.3 | 43.4 | 40.6 | 2.9 | -2.0 | 4.9 |
| dL $\mathrm{t}_{\text {t2,20,9: }}$ | 103.1 | 1.56 | 25.1 | 44.1 | 41.4 | 2.8 | -2.0 | 4.8 |
| $\mathrm{dL}_{\text {t3,1,9: }}$ | 142.2 | 1.56 | 27.1 | 42.3 | 43.4 | -1.1 | -2.0 | 0.9 |
| $\mathrm{dL}_{\text {ti, } 2,9}$ : | 142.2 | 1.56 | 27.2 | 43.5 | 43.5 | 0.0 | -2.0 | 2.0 |
| dL ${ }_{\text {t } 3,3,9}$ : | 142.2 | 1.56 | 26.9 | 44.8 | 43.2 | 1.6 | -2.0 | 3.6 |
| $\mathrm{dL}_{\text {ti, } 4,9}$ : | 142.2 | 1.56 | 26.7 | 44.3 | 43.0 | 1.3 | -2.0 | 3.3 |
| dL ${ }_{\text {L } 3,5,9}$ | 142.2 | 1.56 | 27.0 | 42.6 | 43.3 | -0.7 | -2.0 | 1.3 |
| $\mathrm{dL}_{\text {ti,6,9: }}$ | 142.2 | 1.56 | 27.3 | 41.5 | 43.6 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\mathrm{t} 3,7,9}$ : | 140.6 | 1.56 | 27.9 | 45.1 | 44.2 | 0.9 | -2.0 | 2.9 |
| $\mathrm{dL}_{\text {L3,8,9: }}$ | 142.2 | 1.56 | 27.8 | 42.9 | 44.1 | -1.2 | -2.0 | 0.8 |
| $\mathrm{dL}_{\mathrm{t} 3,9,9}$ | 142.2 | 1.56 | 28.3 | 41.5 | 44.6 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {Li,10,9: }}$ | 142.2 | 1.56 | 26.6 | 46.2 | 42.9 | 3.2 | -2.0 | 5.3 |
| dL ${ }_{\text {L } 3,11,9}$ | 142.2 | 1.56 | 27.6 | 45.1 | 43.9 | 1.2 | -2.0 | 3.2 |
| $\mathrm{dL}_{\text {t } 3,12,9}$ : | 142.2 | 1.56 | 27.5 | 43.4 | 43.8 | -0.4 | -2.0 | 1.6 |
| dL ${ }_{\text {t } 3,13,9}$ : | 140.6 | 1.56 | 29.0 | 43.7 | 45.3 | -1.6 | -2.0 | 0.5 |
| $\mathrm{dL}_{\text {L } 3,14,9}$ | 142.2 | 1.56 | 27.2 | 40.9 | 43.5 | -2.5 | -2.0 | -0.5 |
| dLiz,15,9: | 140.6 | 1.56 | 27.8 | 40.6 | 44.1 | -3.6 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {L } 3,16,9}$ | 142.2 | 1.56 | 27.9 | 45.0 | 44.2 | 0.8 | -2.0 | 2.8 |
| $\mathrm{dL}_{\mathrm{L} 3,17,9}$ : | 142.2 | 1.56 | 27.1 | 43.2 | 43.4 | -0.3 | -2.0 | 1.7 |
| $\mathrm{dL}_{\text {ti,18,9: }}$ | 140.6 | 1.56 | 28.9 | 39.6 | 45.2 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\mathrm{t} 3,19,9}$ | 134.4 | 1.56 | 28.5 | 36.0 | 44.8 | -8.8 | -2.0 | -6.8 |
|  | 142.2 | 1.56 | 29.4 | 41.1 | 45.7 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\text {L3,21,9: }}$ | 140.6 | 1.56 | 28.6 | 42.5 | 44.9 | -2.4 | -2.0 | -0.4 |
| dLis,22,9: | 140.6 | 1.56 | 27.4 | 44.9 | 43.7 | 1.2 | -2.0 | 3.2 |
| dL ${ }_{\text {L } 3,23,9}$ | 142.2 | 1.56 | 27.6 | 43.0 | 43.9 | -0.9 | -2.0 | 1.2 |
| $\mathrm{dL}_{\text {L } 3,24,9}$ | 143.8 | 1.56 | 29.0 | 38.2 | 45.3 | -7.1 | -2.0 | -5.1 |
| $\mathrm{dL}_{\mathrm{t} 3,25,9}$ : | 142.2 | 1.56 | 29.2 | 41.2 | 45.5 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{t}_{3,26,9}}$ | 140.6 | 1.56 | 29.2 | 41.1 | 45.5 | -4.4 | -2.0 | -2.3 |
| dL ${ }_{\text {L } 3,27,9}$ | 140.6 | 1.56 | 28.4 | 44.4 | 44.7 | -0.3 | -2.0 | 1.7 |
| dL ${ }_{\text {L } 3,28,9}$ | 143.8 | 1.56 | 30.0 | 44.0 | 46.3 | -2.3 | -2.0 | -0.3 |
| $\mathrm{dL}_{\text {ti,29,9: }}$ | 140.6 | 1.56 | 28.4 | 45.1 | 44.7 | 0.4 | -2.0 | 2.4 |
| $\mathrm{dL}_{\mathrm{L} 3,30,9}$ : | 140.6 | 1.56 | 29.0 | 43.5 | 45.3 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 3,31,9}$ | 140.6 | 1.56 | 27.7 | 43.6 | 44.0 | -0.4 | -2.0 | 1.6 |
| dL ${ }_{\text {ti,32,9: }}$ | 142.2 | 1.56 | 28.9 | 43.3 | 45.2 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{L} 3,33,9}$ : | 142.2 | 1.56 | 28.6 | 45.3 | 44.9 | 0.3 | -2.0 | 2.3 |
| $\mathrm{dL}_{\mathrm{t} 3,34,9}$ | 139.1 | 1.56 | 28.8 | 42.9 | 45.1 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {L } 3,35,9}$ | 142.2 | 1.56 | 29.4 | 46.6 | 45.7 | 0.9 | -2.0 | 2.9 |
| dL ${ }_{\text {ti,36,9: }}$ | 142.2 | 1.56 | 29.7 | 44.3 | 46.0 | -1.7 | -2.0 | 0.4 |
| dLix,37,9: | 140.6 | 1.56 | 30.2 | 42.3 | 46.5 | -4.2 | -2.0 | -2.1 |
| $\mathrm{dL}_{\mathrm{t} 3,389}$ : | 142.2 | 1.56 | 29.0 | 40.9 | 45.3 | -4.4 | -2.0 | -2.4 |

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| $\mathrm{dL}_{\mathrm{t} 3,39,9}$ : | 142.2 | 1.56 | 29.5 | 40.5 | 45.8 | -5.3 | -2.0 | -3.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLti3,40,9: | 140.6 | 1.56 | 29.7 | 43.0 | 46.0 | -3.0 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t} 3,41,9}$ | 142.2 | 1.56 | 28.4 | 41.3 | 44.7 | -3.5 | -2.0 | -1.4 |
| dL ${ }_{\text {t } 3,42,9 \text { : }}$ | 140.6 | 1.56 | 29.7 | 41.4 | 46.0 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{\mathrm{t} 3,43,9}$ : | 142.2 | 1.56 | 29.4 | 39.8 | 45.7 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\mathrm{t} 3,45,9}$ : | 140.6 | 1.56 | 29.3 | 44.0 | 45.6 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t}, 46,9}$ : | 142.2 | 1.56 | 29.2 | 41.7 | 45.5 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 3,47,9}$ | 140.6 | 1.56 | 30.1 | 39.7 | 46.4 | -6.7 | -2.0 | -4.7 |
| dL ${ }_{\text {t } 3,48,9}$ | 140.6 | 1.56 | 28.0 | 36.1 | 44.3 | -8.2 | -2.0 | -6.2 |
| $\mathrm{dL}_{\mathrm{t} 3,49,9}$ | 142.2 | 1.56 | 28.4 | 41.6 | 44.7 | -3.1 | -2.0 | -1.0 |
| dL ${ }_{\text {ta, } 5,9}$ : | 140.6 | 1.56 | 27.2 | 40.4 | 43.5 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t} 3,51,9}$ | 140.6 | 1.56 | 27.7 | 39.1 | 44.0 | -5.0 | -2.0 | -2.9 |
| $\mathrm{dL}_{\mathrm{t} 3,52,9}$ | 142.2 | 1.56 | 28.5 | 42.5 | 44.8 | -2.3 | -2.0 | -0.2 |
| dL $\mathrm{L}_{\mathrm{t}, 53,9}$ | 140.6 | 1.56 | 28.5 | 44.6 | 44.8 | -0.2 | -2.0 | 1.8 |
| $\mathrm{dL}_{\mathrm{t} 3,54,9}$ | 142.2 | 1.56 | 28.7 | 42.4 | 45.0 | -2.6 | -2.0 | -0.6 |
| $\mathrm{dL}_{\mathrm{t} 3,55,9}$ : | 140.6 | 1.56 | 27.8 | 42.0 | 44.1 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\mathrm{t} 3,56,9}$ : | 143.8 | 1.56 | 28.6 | 35.0 | 44.9 | -9.8 | -2.0 | -7.8 |
| dL $\mathrm{L}_{\mathrm{t}, 57,9}$ | 140.6 | 1.56 | 28.6 | 40.7 | 44.9 | -4.3 | -2.0 | -2.2 |
| dL ${ }_{\text {ta, } 5,9,9}$ | 140.6 | 1.56 | 29.8 | 42.1 | 46.1 | -4.1 | -2.0 | -2.0 |
| $\mathrm{dL}_{\mathrm{t} 3,59,9}$ | 140.6 | 1.56 | 29.0 | 41.4 | 45.3 | -3.9 | -2.0 | -1.9 |
| dL $\mathrm{L}_{\mathrm{t}, 60,9}$ | 139.1 | 1.56 | 29.0 | 39.7 | 45.3 | -5.5 | -2.0 | -3.5 |
| $\mathrm{dL}_{\mathrm{t} 3,619}$ : | 140.6 | 1.56 | 29.4 | 39.3 | 45.7 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\mathrm{t} 3,62,9}$ : | 140.6 | 1.56 | 30.2 | 41.6 | 46.5 | -4.9 | -2.0 | -2.8 |
| dL $\mathrm{LL}_{\mathrm{t}, 64,9}$ | 139.1 | 1.56 | 31.3 | 40.6 | 47.6 | -7.0 | -2.0 | -5.0 |
| $\mathrm{dL}_{\mathrm{t} 3,65,9}$ | 140.6 | 1.56 | 29.4 | 41.6 | 45.7 | -4.2 | -2.0 | -2.2 |
| dL $\mathrm{L}_{\mathrm{t}, 66,9}$ | 142.2 | 1.56 | 30.5 | 39.7 | 46.8 | -7.2 | -2.0 | -5.1 |
| dL ${ }_{\text {ti,67,9: }}$ | 140.6 | 1.56 | 29.8 | 40.8 | 46.1 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t} 3,68,9}$ : | 142.2 | 1.56 | 30.5 | 41.9 | 46.8 | -4.9 | -2.0 | -2.8 |
| $\mathrm{dL}_{\mathrm{L} 3,69,9}$ | 140.6 | 1.56 | 29.8 | 44.5 | 46.1 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 3,70,9}$ | 142.2 | 1.56 | 29.8 | 44.5 | 46.1 | -1.7 | -2.0 | 0.4 |
| dL ${ }_{\text {t } 3,71,9}$ | 140.6 | 1.56 | 28.8 | 42.3 | 45.1 | -2.8 | -2.0 | -0.8 |
| dLLt4,44,9: | 175.0 | 1.56 | 29.7 | 41.8 | 46.0 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t4,63,9: }}$ | 175.0 | 1.56 | 29.6 | 41.0 | 45.9 | -4.8 | -2.0 | -2.8 |
| dL $\mathrm{L}_{\text {t, 20,9: }}$ | 232.8 | 1.56 | 29.4 | 36.7 | 45.8 | -9.1 | -2.1 | -7.1 |
| $\mathrm{dL}_{\text {t5,22,9: }}$ | 232.8 | 1.56 | 27.9 | 35.2 | 44.4 | -9.2 | -2.1 | -7.1 |
| dLt5,25,9: | 232.8 | 1.56 | 29.0 | 35.5 | 45.5 | -10.0 | -2.1 | -7.9 |
| dL $\mathrm{L}_{\text {t5,29,9: }}$ | 232.8 | 1.56 | 28.7 | 36.2 | 45.2 | -9.0 | -2.1 | -6.9 |
| dL ${ }_{\text {t } 5,37,9}$ | 232.8 | 1.56 | 29.1 | 36.8 | 45.6 | -8.8 | -2.1 | -6.7 |
| dLt5,44,9: | 232.8 | 1.56 | 29.5 | 37.8 | 45.9 | -8.1 | -2.1 | -6.0 |
| $\mathrm{dL}_{\text {t5,45,9: }}$ | 232.8 | 1.56 | 29.4 | 37.2 | 45.8 | -8.6 | -2.1 | -6.5 |
| dL L $_{\text {t5,46,9: }}$ | 232.8 | 1.56 | 28.9 | 35.4 | 45.3 | -10.0 | -2.1 | -7.9 |
| $\mathrm{dL}_{\text {t5,47,9: }}$ | 232.8 | 1.56 | 29.7 | 36.6 | 46.1 | -9.5 | -2.1 | -7.5 |
| dLt5,55,9: | 232.8 | 1.56 | 28.4 | 35.8 | 44.8 | -9.0 | -2.1 | -7.0 |
| dLt5,61,9: | 232.8 | 1.56 | 28.1 | 35.9 | 44.5 | -8.7 | -2.1 | -6.6 |
| $\mathrm{dL}_{\text {t5,62,9: }}$ | 232.8 | 1.56 | 30.4 | 36.5 | 46.8 | -10.4 | -2.1 | -8.3 |
| dL $\mathrm{L}_{\text {t5,63,9: }}$ | 232.8 | 1.56 | 30.0 | 36.2 | 46.4 | -10.3 | -2.1 | -8.2 |
| dL ${ }_{\text {t5,65,9: }}$ | 232.8 | 1.56 | 29.9 | 36.6 | 46.4 | -9.8 | -2.1 | -7.7 |
| dLt5,70,9: | 232.8 | 1.56 | 29.9 | 36.4 | 46.4 | -10.0 | -2.1 | -8.0 |
| $\mathrm{dL}_{\text {t5,71,9: }}$ | 232.8 | 1.56 | 29.0 | 35.4 | 45.4 | -10.0 | -2.1 | -7.9 |
| dL $\mathrm{L}_{\mathrm{t}, 22,9}$ | 307.8 | 1.56 | 27.3 | 37.8 | 43.8 | -6.0 | -2.1 | -3.9 |
| dL ${ }_{\text {t6,25,9: }}$ | 309.4 | 1.56 | 28.8 | 38.3 | 45.3 | -7.1 | -2.1 | -5.0 |
| dL $\mathrm{L}_{\text {t, } 50,9}$ : | 323.5 | 1.56 | 27.6 | 36.3 | 44.1 | -7.8 | -2.1 | -5.7 |
| dL $\mathrm{L}_{\text {t, } 5,9,9}$ | 325.0 | 1.56 | 27.4 | 33.8 | 44.0 | -10.3 | -2.1 | -8.1 |
| dL ${ }_{\text {t6,62,9: }}$ | 325.0 | 1.56 | 29.1 | 38.3 | 45.7 | -7.4 | -2.1 | -5.3 |

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| $\mathrm{dL}_{\mathrm{t} 756,9:}$ | 7753.6 | 1.56 | -16.3 | -10.2 | 12.8 | -23.0 | -5.0 | -18.1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{dL}_{\mathrm{t} 7,69,9:}$ | 7623.9 | 1.56 | -16.4 | -10.1 | 12.6 | -22.6 | -5.0 | -17.7 |
| $\mathrm{dL}_{\mathrm{t} 8,33,9}$ | 8064.6 | 1.56 | -17.2 | -9.6 | 12.1 | -21.7 | -5.0 | -16.7 |
| $\mathrm{dL}_{\mathrm{t8}, 4,9:}$ | 8000.5 | 1.56 | -17.0 | -10.9 | 12.3 | -23.2 | -5.0 | -18.2 |
| $\mathrm{dL}_{\mathrm{t8}, 56,9:}$ | 7753.6 | 1.56 | -16.3 | -10.2 | 12.8 | -23.0 | -5.0 | -18.1 |

BIN 9: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathrm{T}}$ | dLtn, ${ }_{\text {, }}$, | $\mathrm{f}_{\mathbf{T}}$ | dLtn, $\mathrm{j}_{\text {, }}$ | $\mathrm{f}_{\mathrm{T}}$ | dL ${ }_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{T}$ | dL ${ }_{\text {tn, }, \text {, }}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | dLtn,j,k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -0.4 | --- | --- | 142.2 | -1.1 | --- | --- | --- | --- | --- | --- |
| 2 | 70.3 | -0.3 | --- | --- | 142.2 | 0.0 | --- | --- | --- | --- | --- | --- |
| 3 | 70.3 | 0.0 | --- | --- | 142.2 | 1.6 | --- | --- | --- | --- | --- | --- |
| 4 | 70.3 | -0.7 | --- | --- | 142.2 | 1.3 | --- | --- | --- | --- | --- | -- |
| 5 | 70.3 | -0.4 | --- | --- | 142.2 | -0.7 | --- | --- | --- | --- | --- | -- |
| 6 | 70.3 | -1.0 | --- | --- | 142.2 | -2.1 | --- | --- | --- | --- | --- | --- |
| 7 | 70.3 | -3.6 | --- | --- | 140.6 | 0.9 | --- | --- | --- | --- | --- | --- |
| 8 | 73.4 | -0.8 | --- | --- | 142.2 | -1.2 | --- | --- | --- | --- | --- | --- |
| 9 | 70.3 | -1.5 | --- | --- | 142.2 | -3.2 | --- | --- | --- | --- | --- | --- |
| 10 | --- | --- | 95.3 | 2.9 | 142.2 | 3.2 | --- | --- | --- | --- | --- | --- |
| 11 | 70.3 | -0.4 | --- | --- | 142.2 | 1.2 | --- | --- | --- | --- | --- | --- |
| 12 | 70.3 | -1.8 | -- | --- | 142.2 | -0.4 | --- | --- | --- | --- | --- | --- |
| 13 | 70.3 | -6.4 | --- | --- | 140.6 | -1.6 | --- | --- | --- | --- | --- | --- |
| 14 | 70.3 | -0.5 | --- | --- | 142.2 | -2.5 | --- | --- | --- | --- | --- | --- |
| 15 | 70.3 | -1.8 | --- | --- | 140.6 | -3.6 | --- | --- | --- | --- | --- | --- |
| 16 | 70.3 | -0.1 | --- | --- | 142.2 | 0.8 | --- | --- | --- | --- | --- | --- |
| 17 | 73.4 | 0.5 | --- | --- | 142.2 | -0.3 | --- | --- | --- | --- | --- | --- |
| 18 | 71.9 | -2.7 | --- | --- | 140.6 | -5.7 | --- | --- | --- | --- | --- | --- |
| 19 | 67.2 | -6.0 | --- | --- | 134.4 | -8.8 | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | 103.1 | 2.8 | 142.2 | -4.5 | --- | --- | 232.8 | -9.1 | --- | --- |
| 21 | 70.3 | -0.8 | --- | --- | 140.6 | -2.4 | --- | --- | --- | --- | --- | --- |
| 22 | 70.3 | 0.2 | --- | --- | 140.6 | 1.2 | --- | --- | 232.8 | -9.2 | 307.8 | -6.0 |
| 23 | 70.3 | -0.9 | --- | --- | 142.2 | -0.9 | --- | --- | --- | --- | --- | --- |
| 24 | 70.3 | -3.0 | --- | --- | 143.8 | -7.1 | --- | --- | --- | --- | --- | --- |
| 25 | 70.3 | -2.7 | --- | --- | 142.2 | -4.3 | --- | --- | 232.8 | -10.0 | 309.4 | -7.1 |
| 26 | 71.9 | -3.1 | --- | --- | 140.6 | -4.4 | --- | --- | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | 140.6 | -0.3 | --- | --- | --- | --- | --- | --- |
| 28 | 73.4 | -1.4 | --- | --- | 143.8 | -2.3 | --- | --- | --- | --- | --- | --- |
| 29 | 70.3 | -2.2 | --- | --- | 140.6 | 0.4 | --- | --- | 232.8 | -9.0 | --- | --- |
| 30 | 71.9 | -4.0 | --- | --- | 140.6 | -1.8 | --- | --- | -- | --- | --- | --- |
| 31 | 70.3 | -0.5 | --- | --- | 140.6 | -0.4 | --- | --- | --- | --- | --- | --- |
| 32 | 70.3 | -2.5 | --- | --- | 142.2 | -1.8 | --- | --- | -- | --- | --- | --- |
| 33 | 70.3 | -2.0 | --- | --- | 142.2 | 0.3 | --- | --- | --- | --- | --- | --- |
| 34 | 68.8 | -5.1 | --- | -- | 139.1 | -2.2 | --- | --- | --- | --- | --- | --- |
| 35 | 70.3 | -1.4 | --- | --- | 142.2 | 0.9 | --- | --- | --- | --- | --- | --- |
| 36 | 70.3 | -1.8 | --- | --- | 142.2 | -1.7 | --- | --- | --- | --- | --- | --- |
| 37 | 70.3 | -2.6 | --- | --- | 140.6 | -4.2 | --- | --- | 232.8 | -8.8 | --- | --- |
| 38 | 70.3 | -1.8 | --- | --- | 142.2 | -4.4 | --- | --- | --- | --- | --- | --- |
| 39 | 70.3 | -1.9 | --- | --- | 142.2 | -5.3 | --- | --- | --- | --- | --- | --- |
| 40 | 70.3 | -3.2 | --- | --- | 140.6 | -3.0 | --- | --- | --- | --- | --- | --- |
| 41 | 70.3 | -2.2 | --- | --- | 142.2 | -3.5 | --- | --- | --- | --- | --- | --- |
| 42 | 70.3 | -4.6 | --- | --- | 140.6 | -4.6 | --- | --- | --- | --- | --- | --- |
| 43 | 73.4 | -3.2 | --- | --- | 142.2 | -5.9 | --- | --- | --- | --- | --- | --- |
| 44 | 71.9 | -1.8 | --- | --- | --- | --- | 175.0 | -4.2 | 232.8 | -8.1 | --- | --- |
| 45 | 70.3 | -2.9 | --- | --- | 140.6 | -1.6 | --- | --- | 232.8 | -8.6 | --- | --- |

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| 46 | 73.4 | -1.5 | --- | --- | 142.2 | -3.8 | --- | --- | 232.8 | -10.0 | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 47 | 70.3 | -3.9 | --- | --- | 140.6 | -6.7 | --- | --- | 232.8 | -9.5 | --- | --- |
| 48 | 73.4 | -1.1 | --- | --- | 140.6 | -8.2 | --- | --- | --- | --- | --- | --- |
| 49 | 73.4 | -1.4 | --- | --- | 142.2 | -3.1 | --- | --- | --- | --- | --- | --- |
| 50 | 71.9 | 0.9 | --- | --- | 140.6 | -3.1 | --- | --- | --- | --- | 323.5 | -7.8 |
| 51 | 71.9 | -0.8 | --- | --- | 140.6 | -5.0 | --- | --- | --- | --- | --- | --- |
| 52 | 71.9 | -1.6 | --- | --- | 142.2 | -2.3 | --- | --- | --- | --- | --- | --- |
| 53 | 71.9 | -3.9 | --- | --- | 140.6 | -0.2 | --- | --- | --- | --- | 325.0 | -10.3 |
| 54 | 73.4 | -2.6 | --- | --- | 142.2 | -2.6 | --- | --- | --- | --- | --- | --- |
| 55 | 73.4 | -0.6 | --- | --- | 140.6 | -2.1 | --- | --- | 232.8 | -9.0 | --- | --- |
| 56 | 73.4 | -2.3 | --- | --- | 143.8 | -9.8 | --- | --- | --- | --- | --- | --- |
| 57 | 70.3 | -3.8 | --- | --- | 140.6 | -4.3 | --- | --- | --- | --- | --- | --- |
| 58 | 71.9 | -4.2 | --- | --- | 140.6 | -4.1 | --- | --- | --- | --- | --- | --- |
| 59 | 71.9 | -3.1 | --- | --- | 140.6 | -3.9 | --- | --- | --- | --- | --- | --- |
| 60 | --- | --- | --- | --- | 139.1 | -5.5 | --- | --- | --- | --- | --- | --- |
| 61 | 68.8 | -5.9 | --- | --- | 140.6 | -6.4 | --- | --- | 232.8 | -8.7 | --- | --- |
| 62 | 70.3 | -3.8 | --- | --- | 140.6 | -4.9 | --- | --- | 232.8 | -10.4 | 325.0 | -7.4 |
| 63 | 70.3 | -1.1 | --- | --- | --- | --- | 175.0 | -4.8 | 232.8 | -10.3 | --- | --- |
| 64 | --- | --- | --- | --- | 139.1 | -7.0 | --- | --- | --- | --- | --- | --- |
| 65 | 70.3 | -5.5 | --- | --- | 140.6 | -4.2 | --- | --- | 232.8 | -9.8 | --- | --- |
| 66 | 70.3 | -3.9 | --- | --- | 142.2 | -7.2 | --- | --- | --- | --- | --- | --- |
| 67 | 70.3 | -3.8 | --- | --- | 140.6 | -5.4 | --- | --- | --- | --- | --- | --- |
| 68 | 70.3 | -3.5 | --- | --- | 142.2 | -4.9 | --- | --- | --- | --- | --- | --- |
| 69 | --- | --- | --- | --- | 140.6 | -1.6 | --- | --- | --- | --- | --- | --- |
| 70 | 70.3 | -2.2 | --- | -- | 142.2 | -1.7 | --- | --- | 232.8 | -10.0 | --- | --- |
| 71 | 70.3 | -4.2 | --- | --- | 140.6 | -2.8 | --- | --- | 232.8 | -10.0 | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 70.9 | -2.3 | 95.4 | -11.2 | 141.4 | -2.2 | 175.0 | -14.9 | 232.8 | -13.6 | 308.6 | -14.8 |
| $\mathrm{La}_{\text {a }}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -0.3 |  | -9.2 |  | -0.2 |  | -12.9 |  | -11.5 |  | -12.7 |
| $\mathrm{K}_{\text {ts }}[\mathrm{dB}$ ] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

?

## BIN 9: Narrowband spectrum



BIN 9: Narrowband spectrum


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## BIN 9: Narrowband spectrum



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BIN 9.5: Tonal components determined

|  | Frequency | delta f | $\mathrm{L}_{\mathrm{pr}, \mathrm{avg}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{j}, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| $\mathrm{dL}_{\mathrm{t} 1,1,9.5}$ : | 70.3 | 1.56 | 25.0 | 38.5 | 41.3 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\text {L1,2,9.5: }}$ | 70.3 | 1.56 | 24.7 | 37.4 | 41.0 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,3,9.5}$ : | 70.3 | 1.56 | 24.1 | 39.6 | 40.4 | -0.8 | -2.0 | 1.2 |
| dLti, de, $^{\text {a }}$ : | 70.3 | 1.56 | 24.4 | 39.9 | 40.7 | -0.9 | -2.0 | 1.1 |
| $\mathrm{dL}_{\mathrm{t} 1,5,9.5}$ : | 73.4 | 1.56 | 23.5 | 41.2 | 39.8 | 1.4 | -2.0 | 3.4 |
| dLti,6,9.5: | 70.3 | 1.56 | 25.4 | 39.0 | 41.7 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\text {L1,7,9.5 }}$ | 68.8 | 1.56 | 27.0 | 38.0 | 43.3 | -5.2 | -2.0 | -3.2 |
| $\mathrm{dL}_{\text {t1, }, \text {, }, 9.5}$ | 70.3 | 1.56 | 23.3 | 40.9 | 39.6 | 1.3 | -2.0 | 3.3 |
| dLti, $9,9.5$ : | 70.3 | 1.56 | 22.5 | 40.0 | 38.8 | 1.2 | -2.0 | 3.2 |
| dL ${ }_{\text {ti,10,9.5: }}$ | 70.3 | 1.56 | 23.6 | 39.1 | 39.9 | -0.8 | -2.0 | 1.2 |
| dL ${ }_{\text {ti,11,9,5: }}$ | 70.3 | 1.56 | 23.7 | 40.1 | 40.0 | 0.1 | -2.0 | 2.1 |
| $\mathrm{dL}_{\mathrm{t} 1,12,9,5:}$ | 70.3 | 1.56 | 23.5 | 40.4 | 39.8 | 0.6 | -2.0 | 2.6 |
| $\mathrm{dL}_{\mathrm{t} 1,13,9,5}$ | 70.3 | 1.56 | 25.6 | 37.8 | 41.9 | -4.1 | -2.0 | -2.1 |
| dL ${ }_{\text {ti,14,9,5: }}$ | 71.9 | 1.56 | 25.4 | 39.0 | 41.7 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t} 1,15,9,5}$ | 70.3 | 1.56 | 22.7 | 39.1 | 39.0 | 0.1 | -2.0 | 2.1 |
| d $\mathrm{d}_{\mathrm{t} 1,16,9.5}$ | 70.3 | 1.56 | 23.7 | 38.9 | 40.0 | -1.1 | -2.0 | 0.9 |
| dL ${ }_{\text {ti,17,9,5: }}$ | 70.3 | 1.56 | 23.6 | 40.6 | 39.9 | 0.7 | -2.0 | 2.7 |
| $\mathrm{dL}_{\mathrm{t} 1,18,9,5}$ | 70.3 | 1.56 | 24.0 | 40.6 | 40.4 | 0.2 | -2.0 | 2.2 |
| $\mathrm{dL}_{\mathrm{t} 1,19,9.5}$ | 70.3 | 1.56 | 25.5 | 39.0 | 41.8 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t} 1,20,9.5}$ | 67.2 | 1.56 | 25.4 | 33.7 | 41.7 | -8.0 | -2.0 | -6.0 |
| dL ${ }_{\text {ti,21,9,5: }}$ | 68.8 | 1.56 | 24.7 | 34.3 | 40.9 | -6.6 | -2.0 | -4.6 |
| $\mathrm{dL}_{\mathrm{t} 1,22,9.5}$ | 68.8 | 1.56 | 26.5 | 33.2 | 42.8 | -9.6 | -2.0 | -7.6 |
| dL ${ }_{\text {t1,24,9,5: }}$ | 70.3 | 1.56 | 25.3 | 41.3 | 41.6 | -0.2 | -2.0 | 1.8 |
| $\mathrm{dL}_{\mathrm{t} 1,25,9,5}$ | 70.3 | 1.56 | 23.8 | 39.9 | 40.1 | -0.2 | -2.0 | 1.8 |
| $\mathrm{dL}_{\mathrm{t} 1,26,9,5:}$ | 70.3 | 1.56 | 24.1 | 40.3 | 40.4 | -0.1 | -2.0 | 1.9 |
| dL ${ }_{\text {t1,27,9,5: }}$ | 70.3 | 1.56 | 26.4 | 39.3 | 42.7 | -3.4 | -2.0 | -1.4 |
| $\mathrm{dL}_{\mathrm{t} 1,29,9,5:}$ | 70.3 | 1.56 | 27.3 | 39.2 | 43.6 | -4.5 | -2.0 | -2.5 |
| dL $\mathrm{dt}_{\text {t, } 30,9.5:}$ | 82.8 | 1.56 | 26.4 | 39.6 | 42.7 | -3.1 | -2.0 | -1.0 |
| dL $\mathrm{dt}_{\text {t }, 31,9.5}$ | 70.3 | 1.56 | 26.8 | 40.1 | 43.1 | -3.0 | -2.0 | -1.0 |
| $\mathrm{dL}_{\mathrm{t} 1,32,9.5}$ | 68.8 | 1.56 | 26.2 | 34.7 | 42.4 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\mathrm{t} 1,33,9.5}$ | 70.3 | 1.56 | 26.2 | 40.9 | 42.5 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 1,34,9,5}$ | 73.4 | 1.56 | 26.0 | 41.1 | 42.3 | -1.1 | -2.0 | 0.9 |
| d $\mathrm{L}_{\mathrm{t} 1,35,9.5}$ | 71.9 | 1.56 | 25.0 | 39.3 | 41.3 | -2.0 | -2.0 | 0.0 |
| $\mathrm{dL}_{\mathrm{t} 1,36,9.5}$ | 71.9 | 1.56 | 25.4 | 40.0 | 41.7 | -1.7 | -2.0 | 0.3 |
| $\mathrm{dL}_{\mathrm{t} 1,37,9,5}$ | 71.9 | 1.56 | 26.1 | 39.5 | 42.4 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t} 1,39,9.5}$ | 71.9 | 1.56 | 25.7 | 38.4 | 42.0 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {ti, }}^{10,9,5:}$ | 71.9 | 1.56 | 24.1 | 40.4 | 40.4 | 0.0 | -2.0 | 2.0 |
| dL ${ }_{\text {t1,41,9.5: }}$ | 71.9 | 1.56 | 24.6 | 40.4 | 40.9 | -0.5 | -2.0 | 1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,42,9,5:}$ | 71.9 | 1.56 | 23.9 | 37.1 | 40.2 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {t1, }}$, $3,9.5$ : | 70.3 | 1.56 | 25.6 | 38.7 | 41.9 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {ti, 44,9,5: }}$ | 70.3 | 1.56 | 25.8 | 40.0 | 42.1 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,45,9,5}$ | 70.3 | 1.56 | 26.9 | 35.6 | 43.2 | -7.7 | -2.0 | -5.7 |
| $\mathrm{dL}_{\mathrm{t} 1,46,9.5}$ | 70.3 | 1.56 | 25.3 | 38.1 | 41.6 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,47,9,5}$ | 68.8 | 1.56 | 24.6 | 35.7 | 40.9 | -5.2 | -2.0 | -3.2 |
|  | 70.3 | 1.56 | 25.9 | 37.8 | 42.2 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\text {t1, 49,9,5: }}$ | 70.3 | 1.56 | 24.6 | 38.3 | 40.9 | -2.7 | -2.0 | -0.7 |
| $\mathrm{dL}_{\mathrm{t} 1,50,9.5}$ : | 68.8 | 1.56 | 25.0 | 37.7 | 41.2 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,51,9.5}$ | 67.2 | 1.56 | 25.8 | 31.9 | 42.1 | -10.2 | -2.0 | -8.1 |
| $\mathrm{dL}_{\mathrm{t} 1,52,9.5}$ | 68.8 | 1.56 | 25.4 | 34.7 | 41.6 | -6.9 | -2.0 | -4.9 |
| d $\mathrm{L}_{\mathrm{t} 1,53,9.5}$ | 70.3 | 1.56 | 26.2 | 38.6 | 42.5 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{\mathrm{t} 1,54,9,5}$ | 71.9 | 1.56 | 27.1 | 40.1 | 43.4 | -3.4 | -2.0 | -1.4 |

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| $\mathrm{dL}_{\mathrm{t} 1,55,9.5}$ : | 70.3 | 1.56 | 26.3 | 41.0 | 42.6 | -1.7 | -2.0 | 0.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLtı,56,9.5: | 70.3 | 1.56 | 27.1 | 39.9 | 43.4 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {t1,57,9,5: }}$ | 71.9 | 1.56 | 25.3 | 39.9 | 41.6 | -1.7 | -2.0 | 0.3 |
| dLti,58,9,5: | 73.4 | 1.56 | 26.1 | 41.0 | 42.4 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\mathrm{t} 1,59,9.5}$ | 71.9 | 1.56 | 26.6 | 40.1 | 42.9 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{t}_{\mathrm{t}, 60,9.5}$ : | 71.9 | 1.56 | 25.7 | 35.9 | 42.0 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\mathrm{t} 1,61,9.5}$ : | 73.4 | 1.56 | 25.3 | 40.0 | 41.6 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 1,62,9.5}$ : | 70.3 | 1.56 | 25.2 | 41.0 | 41.5 | -0.6 | -2.0 | 1.4 |
| dLti,63,9.5: | 70.3 | 1.56 | 26.2 | 37.0 | 42.5 | -5.5 | -2.0 | -3.5 |
| dL ${ }_{\text {t1,64,9.5: }}$ | 70.3 | 1.56 | 24.2 | 40.0 | 40.5 | -0.5 | -2.0 | 1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,65,9.5}$ | 70.3 | 1.56 | 24.7 | 36.7 | 41.0 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{\mathrm{t} 1,66,9.5}$ : | 73.4 | 1.56 | 24.4 | 40.4 | 40.7 | -0.3 | -2.0 | 1.7 |
| dL ${ }_{\text {ti, } 67,9.5}$ : | 68.8 | 1.56 | 23.4 | 39.0 | 39.6 | -0.6 | -2.0 | 1.4 |
| dLti,68,9.5: | 68.8 | 1.56 | 25.6 | 34.4 | 41.8 | -7.4 | -2.0 | -5.4 |
| dL $\mathrm{L}_{\mathrm{t}, 69,9.5}$ | 71.9 | 1.56 | 26.3 | 40.0 | 42.6 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{L}_{\mathrm{t}, 70,9,5}$ | 71.9 | 1.56 | 26.4 | 38.7 | 42.7 | -4.0 | -2.0 | -2.0 |
|  | 68.8 | 1.56 | 24.7 | 35.3 | 40.9 | -5.6 | -2.0 | -3.6 |
| dL ${ }_{\text {t1,72,9.5: }}$ | 68.8 | 1.56 | 26.4 | 33.9 | 42.7 | -8.7 | -2.0 | -6.7 |
| dLLt,73,9.5: | 71.9 | 1.56 | 27.2 | 39.0 | 43.5 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\text {t1, 74,9.5: }}$ | 73.4 | 1.56 | 26.3 | 38.3 | 42.6 | -4.3 | -2.0 | -2.3 |
| dLti,75,9.5: | 71.9 | 1.56 | 25.5 | 38.6 | 41.8 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {ti,76,9,5: }}$ | 70.3 | 1.56 | 25.6 | 38.7 | 41.9 | -3.2 | -2.0 | -1.2 |
| $\mathrm{dL}_{\mathrm{t} 1,77,9.5}$ | 68.8 | 1.56 | 25.8 | 34.8 | 42.0 | -7.2 | -2.0 | -5.2 |
| dL ${ }_{\text {t1,79,9,5: }}$ | 70.3 | 1.56 | 26.0 | 39.9 | 42.3 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{t}_{\mathrm{t}, 80,9.5}$ | 70.3 | 1.56 | 26.3 | 35.6 | 42.6 | -7.0 | -2.0 | -5.0 |
| dLti,81,9.5: | 70.3 | 1.56 | 27.0 | 39.4 | 43.3 | -3.9 | -2.0 | -1.9 |
| dLti,82,9.5: | 71.9 | 1.56 | 27.5 | 39.7 | 43.8 | -4.2 | -2.0 | -2.2 |
| dL ${ }_{\text {t1,83,9,5: }}$ | 70.3 | 1.56 | 24.7 | 33.8 | 41.0 | -7.3 | -2.0 | -5.3 |
| dL ${ }_{\text {t1, }, 84,9.5}$ | 70.3 | 1.56 | 25.7 | 38.7 | 42.0 | -3.3 | -2.0 | -1.3 |
| dL ${ }_{\mathrm{t} 1,85,9,5}$ | 70.3 | 1.56 | 26.3 | 34.7 | 42.6 | -7.9 | -2.0 | -5.9 |
| dLti,86,9.5: | 70.3 | 1.56 | 25.0 | 37.8 | 41.3 | -3.5 | -2.0 | -1.5 |
|  | 70.3 | 1.56 | 25.1 | 39.5 | 41.4 | -1.9 | -2.0 | 0.1 |
| dL $\mathrm{t}_{\mathrm{t}, 88,9,5}$ | 70.3 | 1.56 | 24.8 | 38.4 | 41.1 | -2.7 | -2.0 | -0.7 |
| dLL ${ }_{\text {t1,89,9.5: }}$ | 70.3 | 1.56 | 24.3 | 38.3 | 40.6 | -2.3 | -2.0 | -0.3 |
| dL $\mathrm{L}_{\mathrm{t}, 2,23,9.5}$ | 93.8 | 1.56 | 24.1 | 44.6 | 40.4 | 4.2 | -2.0 | 6.2 |
| dLL2,30,9.5: | 82.8 | 1.56 | 26.4 | 39.6 | 42.7 | -3.1 | -2.0 | -1.0 |
| dL $\mathrm{L}_{\mathrm{t}, 1,9,5}$ : | 142.2 | 1.56 | 28.0 | 42.4 | 44.3 | -1.9 | -2.0 | 0.1 |
| dL $\mathrm{L}_{\text {t } 3,2,9,5:}$ | 142.2 | 1.56 | 27.9 | 44.1 | 44.2 | -0.1 | -2.0 | 1.9 |
| dLi3,3,9.5: | 142.2 | 1.56 | 26.9 | 44.6 | 43.2 | 1.4 | -2.0 | 3.4 |
| dL $\mathrm{L}_{\mathrm{t}, 4,4,5: 5}$ | 140.6 | 1.56 | 27.8 | 44.3 | 44.1 | 0.2 | -2.0 | 2.2 |
| dL ${ }_{\text {l3,5,9,5: }}$ | 142.2 | 1.56 | 27.1 | 45.4 | 43.4 | 2.0 | -2.0 | 4.1 |
| dL $\mathrm{L}_{\mathrm{t}, 6,9,5:}$ | 140.6 | 1.56 | 28.3 | 44.6 | 44.6 | 0.0 | -2.0 | 2.0 |
| dL ${ }_{\text {ti, }, 7,9.5}$ | 140.6 | 1.56 | 29.3 | 45.2 | 45.6 | -0.5 | -2.0 | 1.5 |
| dLiz,8,9.5: | 142.2 | 1.56 | 27.4 | 45.4 | 43.7 | 1.7 | -2.0 | 3.8 |
| dL ${ }_{\text {t3,9,9,5: }}$ | 140.6 | 1.56 | 27.0 | 44.7 | 43.3 | 1.4 | -2.0 | 3.4 |
| dL $\mathrm{L}_{\mathrm{t}, 10,9,5}$ | 140.6 | 1.56 | 27.4 | 44.5 | 43.7 | 0.8 | -2.0 | 2.9 |
| $\mathrm{dL}_{\mathbf{t 3 , 1 1 , 9 . 5}}$ : | 140.6 | 1.56 | 28.1 | 46.0 | 44.4 | 1.5 | -2.0 | 3.5 |
| dL ${ }_{\text {t3,12,9,5: }}$ | 142.2 | 1.56 | 27.9 | 45.7 | 44.2 | 1.5 | -2.0 | 3.5 |
| dL $\mathrm{L}_{\mathbf{1 3 , 1 3 , 9 , 5} \text { : }}$ | 140.6 | 1.56 | 28.8 | 38.5 | 45.1 | -6.7 | -2.0 | -4.7 |
| dL $\mathrm{L}_{\mathrm{t}, 14,9,5}$ | 140.6 | 1.56 | 28.6 | 43.1 | 44.9 | -1.8 | -2.0 | 0.2 |
| dL ${ }_{\text {t3,15,9,5: }}$ | 140.6 | 1.56 | 27.4 | 43.5 | 43.7 | -0.3 | -2.0 | 1.8 |
| dL ${ }_{\text {t3,16,9.5: }}$ | 140.6 | 1.56 | 28.1 | 44.0 | 44.4 | -0.4 | -2.0 | 1.6 |
| dL ${ }_{\text {t3,17,9.5: }}$ | 140.6 | 1.56 | 27.7 | 43.2 | 44.0 | -0.8 | -2.0 | 1.2 |
| dL ${ }_{\text {t3,18,9,5: }}$ | 140.6 | 1.56 | 28.2 | 41.5 | 44.5 | -3.0 | -2.0 | -1.0 |

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| $\mathrm{dL}_{\mathrm{t}, 19,9.5}$ : | 140.6 | 1.56 | 28.9 | 43.8 | 45.2 | -1.3 | -2.0 | 0.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL $\mathrm{L}_{\mathrm{t}, 20,9.5}$ | 139.1 | 1.56 | 28.7 | 42.2 | 45.0 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t}, 22,9.5}$ : | 139.1 | 1.56 | 29.9 | 46.3 | 46.2 | 0.2 | -2.0 | 2.2 |
| dLite23,9.5: | 142.2 | 1.56 | 26.3 | 46.6 | 42.6 | 3.9 | -2.0 | 6.0 |
| $\mathrm{dL}_{\mathrm{t} 3,24,9.5}$ : | 142.2 | 1.56 | 29.1 | 39.3 | 45.4 | -6.1 | -2.0 | -4.1 |
| dL ${ }_{\text {t } 3,25,9.5}$ : | 140.6 | 1.56 | 27.8 | 42.7 | 44.1 | -1.4 | -2.0 | 0.6 |
| dL ${ }_{\text {t } 3,26,9.5}$ : | 140.6 | 1.56 | 28.1 | 44.4 | 44.4 | -0.1 | -2.0 | 2.0 |
| $\mathrm{dL}_{\mathrm{t} 3,27,9.5}$ : | 142.2 | 1.56 | 29.0 | 42.2 | 45.3 | -3.1 | -2.0 | -1.1 |
| dL ${ }_{\text {t } 3,28,9.5}$ | 139.1 | 1.56 | 29.7 | 46.2 | 46.0 | 0.2 | -2.0 | 2.2 |
| dL $\mathrm{L}_{\mathrm{t}, 29,9,5}$ | 140.6 | 1.56 | 29.9 | 42.2 | 46.2 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\mathrm{t} 3,30,9.5}$ : | 139.1 | 1.56 | 28.6 | 43.3 | 44.9 | -1.7 | -2.0 | 0.3 |
| dL ${ }_{\text {t }}^{\text {d,31,9.5: }}$ | 140.6 | 1.56 | 29.3 | 43.2 | 45.6 | -2.4 | -2.0 | -0.4 |
| dL ${ }_{\text {t3,32,9,5: }}$ | 137.5 | 1.56 | 29.1 | 39.4 | 45.4 | -6.0 | -2.0 | -4.0 |
| dLLi,33,9.5: | 142.2 | 1.56 | 29.8 | 42.0 | 46.1 | -4.1 | -2.0 | -2.1 |
| dL $\mathrm{L}_{\mathrm{t}, 34,9.5}$ | 142.2 | 1.56 | 29.4 | 43.4 | 45.7 | -2.3 | -2.0 | -0.3 |
| $\mathrm{dL}_{\mathrm{t} 3,35,9.5}$ : | 140.6 | 1.56 | 28.5 | 42.5 | 44.8 | -2.3 | -2.0 | -0.2 |
| dL $\mathrm{L}_{\mathrm{t}, 36,9.5}$ | 140.6 | 1.56 | 29.1 | 41.1 | 45.4 | -4.3 | -2.0 | -2.3 |
| dL $\mathrm{L}_{\mathrm{t}, 37,9,5 \text { : }}$ | 140.6 | 1.56 | 29.2 | 39.8 | 45.5 | -5.7 | -2.0 | -3.7 |
| dL ${ }_{\text {t }}$,38,9,5: | 139.1 | 1.56 | 29.4 | 38.7 | 45.7 | -7.0 | -2.0 | -5.0 |
| $\mathrm{dL}_{\mathrm{t} 3,39,9.5}$ : | 140.6 | 1.56 | 29.1 | 43.2 | 45.4 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {t } 3,40,9.5}$ | 140.6 | 1.56 | 28.2 | 41.1 | 44.5 | -3.4 | -2.0 | -1.4 |
| dL $\mathrm{L}_{\mathrm{t}, 41,9.5}$ | 142.2 | 1.56 | 28.4 | 41.7 | 44.7 | -2.9 | -2.0 | -0.9 |
| dL ${ }_{\text {t } 3,42,9.5}$ | 139.1 | 1.56 | 27.5 | 42.8 | 43.8 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{\mathrm{t}, 43,9.5}$ : | 140.6 | 1.56 | 29.1 | 43.5 | 45.4 | -2.0 | -2.0 | 0.0 |
| dL $\mathrm{L}_{\mathrm{t}, 44,9,5}$ | 143.8 | 1.56 | 29.1 | 40.6 | 45.4 | -4.8 | -2.0 | -2.8 |
| dL ${ }_{\text {t } 3,45,9,5:}$ | 140.6 | 1.56 | 29.9 | 38.6 | 46.2 | -7.6 | -2.0 | -5.6 |
| dL ${ }_{\text {t3,46,9.5: }}$ | 140.6 | 1.56 | 28.6 | 42.7 | 44.9 | -2.2 | -2.0 | -0.2 |
| dL $\mathrm{L}_{\mathrm{t}, 47,9.5}$ : | 140.6 | 1.56 | 29.3 | 39.9 | 45.6 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\mathrm{t}, 48,9.5}$ : | 140.6 | 1.56 | 29.6 | 41.6 | 45.9 | -4.3 | -2.0 | -2.3 |
| dL $\mathrm{L}_{\mathrm{t}, 49,9.5}$ | 140.6 | 1.56 | 28.3 | 42.6 | 44.6 | -2.1 | -2.0 | -0.1 |
| dL $\mathrm{L}_{\mathrm{t}, 50,9.5}$ | 140.6 | 1.56 | 29.2 | 42.9 | 45.5 | -2.6 | -2.0 | -0.6 |
| dL ${ }_{\text {t } 3,51,9.5}$ | 134.4 | 1.56 | 28.0 | 42.3 | 44.3 | -1.9 | -2.0 | 0.1 |
| dL ${ }_{\text {t } 3,52,9.5}$ : | 139.1 | 1.56 | 28.7 | 43.0 | 45.0 | -2.0 | -2.0 | 0.0 |
| dL $\mathrm{L}_{\mathrm{t}, 53,9,5}$ | 140.6 | 1.56 | 29.0 | 41.6 | 45.3 | -3.7 | -2.0 | -1.7 |
| $\mathrm{dL}_{\mathrm{t} 3,54,9.5}$ : | 140.6 | 1.56 | 29.6 | 38.9 | 45.9 | -7.0 | -2.0 | -5.0 |
| dL $\mathrm{L}_{\mathrm{t}, 55,9.5}$ | 142.2 | 1.56 | 29.3 | 44.4 | 45.6 | -1.2 | -2.0 | 0.8 |
| dL ${ }_{\text {t3,56,9.5: }}$ | 140.6 | 1.56 | 30.7 | 38.1 | 47.0 | -8.8 | -2.0 | -6.8 |
| dL ${ }_{\text {t3, } 57,9.5}$ | 140.6 | 1.56 | 29.5 | 42.5 | 45.8 | -3.3 | -2.0 | -1.3 |
| dL $\mathrm{L}_{\text {I }, 58,9,5 \text { : }}$ | 142.2 | 1.56 | 29.5 | 45.9 | 45.8 | 0.1 | -2.0 | 2.1 |
| dL ${ }_{\text {t3,59,9.5: }}$ | 142.2 | 1.56 | 29.9 | 38.3 | 46.2 | -7.9 | -2.0 | -5.9 |
| dL $\mathrm{L}_{\mathrm{t}, 60,9.5}$ : | 139.1 | 1.56 | 28.8 | 41.1 | 45.1 | -4.0 | -2.0 | -2.0 |
| dL ${ }_{\text {t3,61,9.5: }}$ | 142.2 | 1.56 | 28.5 | 38.1 | 44.8 | -6.7 | -2.0 | -4.6 |
| dLix,62,9.5: | 142.2 | 1.56 | 28.9 | 42.7 | 45.2 | -2.5 | -2.0 | -0.5 |
| dL ${ }_{\text {t } 3,63,9.5}$ | 140.6 | 1.56 | 29.5 | 41.6 | 45.8 | -4.2 | -2.0 | -2.1 |
| dL $\mathrm{L}_{\mathrm{t}, 64,9.5}$ : | 142.2 | 1.56 | 28.0 | 41.6 | 44.3 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{L}_{\mathrm{t}, 65,9.5}$ : | 140.6 | 1.56 | 28.6 | 43.2 | 44.9 | -1.7 | -2.0 | 0.3 |
| dL $\mathrm{L}_{\mathrm{t}, 66,9.5}$ : | 142.2 | 1.56 | 27.8 | 41.3 | 44.1 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{L}_{\mathrm{t}, 67,9.5}$ | 140.6 | 1.56 | 28.5 | 44.5 | 44.8 | -0.2 | -2.0 | 1.8 |
| dL $\mathrm{L}_{\mathrm{t}, 68,9.5}$ : | 139.1 | 1.56 | 28.8 | 41.7 | 45.1 | -3.5 | -2.0 | -1.4 |
| dL $\mathrm{L}_{\mathrm{t}, 69,9.5}$ | 140.6 | 1.56 | 29.5 | 41.3 | 45.8 | -4.5 | -2.0 | -2.5 |
| dL $\mathrm{L}_{\mathrm{t}, 70,9.5}$ | 142.2 | 1.56 | 29.8 | 40.7 | 46.1 | -5.4 | -2.0 | -3.4 |
| dL ${ }_{\text {t3,72,9,5: }}$ | 139.1 | 1.56 | 29.2 | 42.4 | 45.5 | -3.0 | -2.0 | -1.0 |
| dL ${ }_{\text {t3,73,9,5: }}$ | 140.6 | 1.56 | 29.6 | 41.8 | 45.9 | -4.2 | -2.0 | -2.1 |
| dL ${ }_{\text {t3,74,9,5: }}$ | 142.2 | 1.56 | 29.1 | 41.3 | 45.4 | -4.1 | -2.0 | -2.1 |

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| dL ${ }_{\text {t3, } 75,9.5}$ : | 140.6 | 1.56 | 29.3 | 44.4 | 45.6 | -1.3 | -2.0 | 0.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL $\mathrm{L}_{\text {t }}$,76,9.5: | 142.2 | 1.56 | 29.0 | 40.6 | 45.3 | -4.7 | -2.0 | -2.6 |
| dL ${ }_{\text {t3,77,9.5: }}$ | 139.1 | 1.56 | 29.7 | 42.2 | 46.0 | -3.7 | -2.0 | -1.7 |
| dL $\mathrm{L}_{\text {t }}$,78,9.5: | 139.1 | 1.56 | 29.8 | 39.2 | 46.1 | -6.9 | -2.0 | -4.9 |
| dL ${ }_{\text {t3,79,9.5: }}$ | 140.6 | 1.56 | 29.5 | 39.3 | 45.8 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\mathrm{t} 3,80,9.5}$ : | 140.6 | 1.56 | 30.1 | 42.4 | 46.4 | -4.0 | -2.0 | -2.0 |
| dL $\mathrm{L}_{\mathrm{t}, 81,9.5}$ : | 142.2 | 1.56 | 30.3 | 40.0 | 46.6 | -6.6 | -2.0 | -4.6 |
| $\mathrm{dL}_{\mathrm{t} 3,82,9.5}$ : | 142.2 | 1.56 | 29.8 | 43.9 | 46.1 | -2.2 | -2.0 | -0.1 |
| dL $\mathrm{L}_{13,8,9,9.5}$ | 140.6 | 1.56 | 28.4 | 39.6 | 44.7 | -5.1 | -2.0 | -3.1 |
| dL $\mathrm{L}_{\mathrm{t}, 84,9.5}$ : | 140.6 | 1.56 | 29.0 | 39.5 | 45.3 | -5.8 | -2.0 | -3.8 |
| $\mathrm{dL}_{\mathrm{t} 3,85,9.5}$ : | 140.6 | 1.56 | 29.5 | 42.5 | 45.8 | -3.3 | -2.0 | -1.3 |
| dL $\mathrm{L}_{\mathrm{t}, 86,9.5}$ : | 140.6 | 1.56 | 28.7 | 41.9 | 45.0 | -3.1 | -2.0 | -1.1 |
| dL $\mathrm{L}_{\mathrm{t}, 87,9.5}$ : | 142.2 | 1.56 | 28.6 | 40.7 | 44.9 | -4.2 | -2.0 | -2.1 |
| dL $\mathrm{L}_{\text {t, }, 88,9.5}$ | 140.6 | 1.56 | 28.6 | 43.1 | 44.9 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t}, 8,9,9.5}$ | 140.6 | 1.56 | 28.3 | 41.1 | 44.6 | -3.5 | -2.0 | -1.5 |
| dL t4, $71,9.5^{\text {a }}$ | 175.0 | 1.56 | 28.1 | 42.2 | 44.4 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {t5,2,9,9.5: }}$ | 232.8 | 1.56 | 28.2 | 34.3 | 44.7 | -10.3 | -2.1 | -8.3 |
| dL ${ }_{\text {t5,2,9,.5: }}$ | 232.8 | 1.56 | 29.4 | 36.2 | 45.8 | -9.6 | -2.1 | -7.6 |
| dLt5, 25,9.5: | 232.8 | 1.56 | 27.9 | 35.5 | 44.3 | -8.8 | -2.1 | -6.8 |
| dL ${ }_{\text {t5,2,9,9.5: }}$ | 232.8 | 1.56 | 28.7 | 35.6 | 45.2 | -9.6 | -2.1 | -7.5 |
| dLt5,30,9.5: | 232.8 | 1.56 | 28.3 | 34.8 | 44.7 | -9.9 | -2.1 | -7.8 |
| dL t5,31,9.5: $^{\text {a }}$ | 232.8 | 1.56 | 29.0 | 35.9 | 45.5 | -9.5 | -2.1 | -7.5 |
| dL ${ }_{\text {5 } 5,32,9.5}$ : | 232.8 | 1.56 | 27.8 | 35.4 | 44.2 | -8.9 | -2.1 | -6.8 |
| dL ${ }_{\text {t5,3, }, 9.5}$ : | 232.8 | 1.56 | 28.7 | 36.0 | 45.1 | -9.1 | -2.1 | -7.1 |
| dL ${ }_{\text {t5, } 36,9.5}$ : | 232.8 | 1.56 | 29.1 | 35.3 | 45.5 | -10.2 | -2.1 | -8.1 |
| dL t5, 37,9.5: $^{\text {a }}$ | 232.8 | 1.56 | 28.6 | 35.7 | 45.1 | -9.4 | -2.1 | -7.4 |
| dL ${ }_{\text {t } 5,71,9.5}$ | 232.8 | 1.56 | 27.9 | 35.2 | 44.4 | -9.2 | -2.1 | -7.1 |
| dL ${ }_{\text {t, }, 82,9,5}$ | 232.8 | 1.56 | 29.8 | 36.6 | 46.2 | -9.7 | -2.1 | -7.6 |
| dL t6,27,9.5: $^{\text {a }}$ | 309.4 | 1.56 | 27.5 | 35.2 | 44.1 | -8.9 | -2.1 | -6.8 |
| dL t6,61,9.5: $^{\text {e }}$ | 325.0 | 1.56 | 27.5 | 37.4 | 44.1 | -6.6 | -2.1 | -4.5 |
| dL t6,64,9.5: $^{\text {a }}$ | 325.0 | 1.56 | 28.2 | 34.5 | 44.8 | -10.2 | -2.1 | -8.1 |
| dL t6, $73,9.5^{\text {a }}$ | 325.0 | 1.56 | 27.8 | 33.9 | 44.3 | -10.5 | -2.1 | -8.3 |
| $\mathrm{dL}_{\text {t6,75,9.5: }}$ | 325.0 | 1.56 | 28.7 | 38.0 | 45.2 | -7.2 | -2.1 | -5.1 |
| $\mathrm{dL}_{\text {t6,79,9.5: }}$ | 325.0 | 1.56 | 29.2 | 35.7 | 45.7 | -10.0 | -2.1 | -7.9 |
| dL ${ }_{\text {t7,9,9,5: }}$ | 8039.6 | 1.56 | -16.4 | -9.8 | 12.9 | -22.7 | -5.0 | -17.7 |
| d $\mathrm{L}_{\text {t7,11,9.5: }}$ | 8034.9 | 1.56 | -16.4 | -10.0 | 12.9 | -22.9 | -5.0 | -17.9 |
| dL $\mathrm{L}_{\mathrm{t}, 12,9,5}$ | 8020.8 | 1.56 | -15.7 | -9.4 | 13.5 | -22.9 | -5.0 | -17.9 |
| d $\mathrm{L}_{\mathrm{t}, 21,9,5}$ | 8030.2 | 1.56 | -16.3 | -10.0 | 13.0 | -23.0 | -5.0 | -18.0 |
| dLt7, 26,9.5: | 7994.2 | 1.56 | -16.6 | -9.2 | 12.7 | -21.8 | -5.0 | -16.8 |
| dL $\mathrm{Lt}_{\text {t, } 27,9,5:}$ | 8066.1 | 1.56 | -17.3 | -11.3 | 12.0 | -23.3 | -5.0 | -18.3 |
| dL $\mathrm{Lt}_{\text {7, } 61,9.5}$ : | 7947.4 | 1.56 | -17.6 | -11.3 | 11.6 | -23.0 | -5.0 | -18.0 |
| dL ${ }_{\text {t7,86,9.5: }}$ | 8052.1 | 1.56 | -17.2 | -11.0 | 12.1 | -23.2 | -5.0 | -18.2 |

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BIN 9.5: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\mathrm{tn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tr, j, }}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tr, j, } \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -2.8 | --- | --- | 142.2 | -1.9 | --- | --- | --- | --- | --- | --- |
| 2 | 70.3 | -3.6 | --- | --- | 142.2 | -0.1 | --- | --- | --- | --- | --- | --- |
| 3 | 70.3 | -0.8 | --- | --- | 142.2 | 1.4 | --- | --- | --- | --- | --- | --- |
| 4 | 70.3 | -0.9 | --- | --- | 140.6 | 0.2 | --- | --- | --- | --- | --- | --- |
| 5 | 73.4 | 1.4 | --- | --- | 142.2 | 2.0 | --- | --- | --- | --- | --- | --- |
| 6 | 70.3 | -2.8 | --- | --- | 140.6 | 0.0 | --- | --- | --- | --- | --- | --- |
| 7 | 68.8 | -5.2 | --- | --- | 140.6 | -0.5 | --- | --- | --- | --- | --- | --- |
| 8 | 70.3 | 1.3 | --- | --- | 142.2 | 1.7 | --- | --- | --- | --- | --- | --- |
| 9 | 70.3 | 1.2 | --- | --- | 140.6 | 1.4 | --- | --- | --- | --- | --- | --- |
| 10 | 70.3 | -0.8 | --- | --- | 140.6 | 0.8 | --- | --- | --- | --- | --- | --- |
| 11 | 70.3 | 0.1 | --- | --- | 140.6 | 1.5 | --- | --- | --- | --- | --- | --- |
| 12 | 70.3 | 0.6 | --- | --- | 142.2 | 1.5 | --- | --- | --- | --- | --- | --- |
| 13 | 70.3 | -4.1 | --- | --- | 140.6 | -6.7 | --- | --- | --- | --- | --- | --- |
| 14 | 71.9 | -2.8 | --- | --- | 140.6 | -1.8 | --- | --- | --- | --- | --- | --- |
| 15 | 70.3 | 0.1 | --- | --- | 140.6 | -0.3 | --- | --- | --- | --- | --- | --- |
| 16 | 70.3 | -1.1 | --- | --- | 140.6 | -0.4 | --- | --- | --- | --- | --- | --- |
| 17 | 70.3 | 0.7 | --- | --- | 140.6 | -0.8 | --- | --- | --- | --- | --- | --- |
| 18 | 70.3 | 0.2 | --- | --- | 140.6 | -3.0 | --- | --- | --- | --- | --- | --- |
| 19 | 70.3 | -2.8 | --- | --- | 140.6 | -1.3 | --- | --- | --- | --- | --- | --- |
| 20 | 67.2 | -8.0 | --- | --- | 139.1 | -2.8 | --- | --- | 232.8 | -10.3 | --- | --- |
| 21 | 68.8 | -6.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 68.8 | -9.6 | --- | --- | 139.1 | 0.2 | --- | --- | 232.8 | -9.6 | --- | --- |
| 23 | --- | --- | 93.8 | 4.2 | 142.2 | 3.9 | --- | --- | --- | --- | --- | --- |
| 24 | 70.3 | -0.2 | --- | --- | 142.2 | -6.1 | --- | --- | --- | --- | --- | --- |
| 25 | 70.3 | -0.2 | --- | --- | 140.6 | -1.4 | --- | --- | 232.8 | -8.8 | --- | --- |
| 26 | 70.3 | -0.1 | --- | --- | 140.6 | -0.1 | --- | --- | --- | --- | --- | --- |
| 27 | 70.3 | -3.4 | --- | --- | 142.2 | -3.1 | --- | --- | --- | --- | 309.4 | -8.9 |
| 28 | --- | --- | --- | --- | 139.1 | 0.2 | --- | --- | --- | --- | --- | --- |
| 29 | 70.3 | -4.5 | --- | --- | 140.6 | -4.0 | --- | --- | 232.8 | -9.6 | --- | --- |
| 30 | 82.8 | -3.1 | 82.8 | -3.1 | 139.1 | -1.7 | --- | --- | 232.8 | -9.9 | --- | --- |
| 31 | 70.3 | -3.0 | --- | --- | 140.6 | -2.4 | --- | --- | 232.8 | -9.5 | --- | --- |
| 32 | 68.8 | -7.6 | --- | --- | 137.5 | -6.0 | --- | --- | 232.8 | -8.9 | --- | --- |
| 33 | 70.3 | -1.6 | --- | --- | 142.2 | -4.1 | --- | --- | --- | --- | --- | --- |
| 34 | 73.4 | -1.1 | --- | --- | 142.2 | -2.3 | --- | --- | --- | --- | --- | --- |
| 35 | 71.9 | -2.0 | --- | --- | 140.6 | -2.3 | --- | --- | 232.8 | -9.1 | --- | --- |
| 36 | 71.9 | -1.7 | --- | --- | 140.6 | -4.3 | --- | --- | 232.8 | -10.2 | --- | --- |
| 37 | 71.9 | -2.9 | --- | --- | 140.6 | -5.7 | --- | --- | 232.8 | -9.4 | --- | --- |
| 38 | --- | --- | --- | --- | 139.1 | -7.0 | --- | --- | --- | --- | --- | --- |
| 39 | 71.9 | -3.6 | --- | --- | 140.6 | -2.2 | --- | --- | --- | --- | --- | --- |
| 40 | 71.9 | 0.0 | --- | --- | 140.6 | -3.4 | --- | --- | --- | --- | --- | --- |
| 41 | 71.9 | -0.5 | --- | --- | 142.2 | -2.9 | --- | --- | --- | --- | --- | --- |
| 42 | 71.9 | -3.2 | --- | --- | 139.1 | -1.0 | --- | --- | --- | --- | --- | --- |
| 43 | 70.3 | -3.2 | --- | --- | 140.6 | -2.0 | --- | --- | --- | --- | --- | --- |
| 44 | 70.3 | -2.2 | --- | --- | 143.8 | -4.8 | --- | --- | --- | --- | --- | --- |
| 45 | 70.3 | -7.7 | --- | --- | 140.6 | -7.6 | --- | --- | --- | --- | --- | --- |
| 46 | 70.3 | -3.5 | --- | --- | 140.6 | -2.2 | --- | --- | --- | --- | --- | --- |
| 47 | 68.8 | -5.2 | --- | --- | 140.6 | -5.7 | --- | --- | --- | --- | --- | --- |
| 48 | 70.3 | -4.4 | --- | --- | 140.6 | -4.3 | --- | --- | --- | --- | --- | --- |
| 49 | 70.3 | -2.7 | --- | --- | 140.6 | -2.1 | --- | --- | --- | --- | --- | --- |
| 50 | 68.8 | -3.5 | --- | --- | 140.6 | -2.6 | --- | --- | --- | --- | --- | --- |
| 51 | 67.2 | -10.2 | --- | --- | 134.4 | -1.9 | --- | --- | --- | --- | --- | --- |

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| 52 | 68.8 | -6.9 | --- | --- | 139.1 | -2.0 | --- | --- | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 53 | 70.3 | -3.9 | --- | --- | 140.6 | -3.7 | --- | --- | --- | --- | --- | --- |
| 54 | 71.9 | -3.4 | --- | --- | 140.6 | -7.0 | --- | --- | --- | --- | --- | --- |
| 55 | 70.3 | -1.7 | --- | --- | 142.2 | -1.2 | --- | --- | --- | --- | --- | --- |
| 56 | 70.3 | -3.6 | --- | --- | 140.6 | -8.8 | --- | --- | --- | --- | --- | --- |
| 57 | 71.9 | -1.7 | --- | --- | 140.6 | -3.3 | --- | --- | --- | --- | --- | --- |
| 58 | 73.4 | -1.4 | --- | --- | 142.2 | 0.1 | --- | --- | --- | --- | --- | --- |
| 59 | 71.9 | -2.8 | --- | --- | 142.2 | -7.9 | --- | --- | --- | --- | --- | --- |
| 60 | 71.9 | -6.1 | --- | --- | 139.1 | -4.0 | --- | --- | --- | --- | --- | --- |
| 61 | 73.4 | -1.6 | --- | --- | 142.2 | -6.7 | --- | --- | --- | --- | 325.0 | -6.6 |
| 62 | 70.3 | -0.6 | --- | --- | 142.2 | -2.5 | --- | --- | --- | --- | --- | --- |
| 63 | 70.3 | -5.5 | --- | --- | 140.6 | -4.2 | --- | --- | --- | --- | --- | --- |
| 64 | 70.3 | -0.5 | --- | --- | 142.2 | -2.7 | --- | --- | --- | --- | 325.0 | -10.2 |
| 65 | 70.3 | -4.4 | --- | --- | 140.6 | -1.7 | --- | --- | --- | --- | --- | --- |
| 66 | 73.4 | -0.3 | --- | --- | 142.2 | -2.8 | --- | --- | --- | --- | --- | --- |
| 67 | 68.8 | -0.6 | --- | --- | 140.6 | -0.2 | --- | --- | --- | --- | --- | --- |
| 68 | 68.8 | -7.4 | --- | --- | 139.1 | -3.5 | --- | --- | --- | --- | --- | --- |
| 69 | 71.9 | -2.6 | --- | --- | 140.6 | -4.5 | --- | --- | --- | --- | --- | --- |
| 70 | 71.9 | -4.0 | --- | --- | 142.2 | -5.4 | --- | --- | --- | --- | --- | --- |
| 71 | 68.8 | -5.6 | --- | --- | --- | --- | 175.0 | -2.2 | 232.8 | -9.2 | --- | --- |
| 72 | 68.8 | -8.7 | --- | --- | 139.1 | -3.0 | --- | --- | --- | --- | --- | --- |
| 73 | 71.9 | -4.4 | --- | --- | 140.6 | -4.2 | --- | --- | --- | --- | 325.0 | -10.5 |
| 74 | 73.4 | -4.3 | --- | --- | 142.2 | -4.1 | --- | --- | --- | --- | --- | --- |
| 75 | 71.9 | -3.2 | --- | --- | 140.6 | -1.3 | --- | --- | --- | --- | 325.0 | -7.2 |
| 76 | 70.3 | -3.2 | --- | --- | 142.2 | -4.7 | --- | --- | --- | --- | --- | --- |
| 77 | 68.8 | -7.2 | --- | --- | 139.1 | -3.7 | --- | --- | --- | --- | --- | --- |
| 78 | --- | --- | --- | --- | 139.1 | -6.9 | --- | --- | --- | --- | --- | --- |
| 79 | 70.3 | -2.4 | --- | --- | 140.6 | -6.5 | --- | --- | --- | --- | 325.0 | -10.0 |
| 80 | 70.3 | -7.0 | --- | --- | 140.6 | -4.0 | --- | --- | --- | --- | --- | --- |
| 81 | 70.3 | -3.9 | --- | --- | 142.2 | -6.6 | --- | --- | --- | --- | --- | --- |
| 82 | 71.9 | -4.2 | --- | --- | 142.2 | -2.2 | --- | --- | 232.8 | -9.7 | --- | --- |
| 83 | 70.3 | -7.3 | --- | --- | 140.6 | -5.1 | --- | --- | --- | --- | --- | --- |
| 84 | 70.3 | -3.3 | --- | --- | 140.6 | -5.8 | --- | --- | --- | --- | --- | --- |
| 85 | 70.3 | -7.9 | --- | --- | 140.6 | -3.3 | --- | --- | --- | --- | --- | --- |
| 86 | 70.3 | -3.5 | --- | --- | 140.6 | -3.1 | --- | --- | --- | --- | --- | --- |
| 87 | 70.3 | -1.9 | --- | --- | 142.2 | -4.2 | --- | --- | --- | --- | --- | --- |
| 88 | 70.3 | -2.7 | --- | --- | 140.6 | -1.8 | --- | --- | --- | --- | --- | --- |
| 89 | 70.3 | -2.3 | --- | --- | 140.6 | -3.5 | --- | --- | --- | --- | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL} \mathrm{L}_{\mathrm{k}}[\mathrm{dB}]$ | 70.7 | -2.7 | 93.6 | -12.4 | 140.8 | -2.1 | 175.0 | -15.3 | 232.8 | -14.6 | 310.3 | -15.3 |
| $\mathrm{La}_{\mathrm{a}}$ [dB] |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| dL ${ }_{\text {a, }}$ [dB] |  | -0.7 |  | -10.4 |  | -0.1 |  | -13.3 |  | -12.5 |  | -13.2 |
| $\mathrm{K}_{\text {tn }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |



BIN 9.5: Narrowband spectrum


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BIN 10: Tonal components determined

|  | Frequency | delta f | $\mathrm{L}_{\text {pn,avg, }, \mathrm{j} \text {, }}$ | $\mathrm{Lppt,j}, \mathrm{k}^{\text {l }}$ | Lpn,j,k | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\text {a }}$ | $\mathrm{dL}_{\mathrm{a}, \mathrm{j}, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| $\mathrm{dL}_{\mathrm{t} 1,1,10}$ : | 70.3 | 1.56 | 24.6 | 39.1 | 41.0 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,2,10}$ : | 70.3 | 1.56 | 26.1 | 39.7 | 42.4 | -2.7 | -2.0 | -0.7 |
| dLti1,3,10: | 70.3 | 1.56 | 23.3 | 39.9 | 39.6 | 0.3 | -2.0 | 2.3 |
| dLti1,4,10: | 70.3 | 1.56 | 23.9 | 40.4 | 40.2 | 0.2 | -2.0 | 2.2 |
| $\mathrm{dL}_{\mathrm{t} 1,5,10}$ : | 70.3 | 1.56 | 24.3 | 38.7 | 40.6 | -1.9 | -2.0 | 0.1 |
| dL ${ }_{\text {t1, } 6,10}$ : | 82.8 | 1.56 | 25.4 | 41.7 | 41.7 | 0.0 | -2.0 | 2.0 |
| dL ${ }_{\text {t1, 7, } 10}$ : | 71.9 | 1.56 | 24.1 | 35.7 | 40.4 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t} 1,8,10}$ : | 68.8 | 1.56 | 26.5 | 36.4 | 42.8 | -6.3 | -2.0 | -4.3 |
| dLti1,9,10: | 68.8 | 1.56 | 25.5 | 31.9 | 41.7 | -9.9 | -2.0 | -7.9 |
| dL ${ }_{\text {t1,10,10 }}$ : | 70.3 | 1.56 | 25.1 | 39.0 | 41.4 | -2.4 | -2.0 | -0.4 |
| dLta,11,10: | 73.4 | 1.56 | 27.0 | 33.6 | 43.3 | -9.8 | -2.0 | -7.8 |
| dL ${ }_{\text {ti,12,10 }}$ : | 68.8 | 1.56 | 24.4 | 35.2 | 40.6 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t} 1,13,10}$ : | 70.3 | 1.56 | 25.5 | 39.6 | 41.8 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,14,10}$ : | 71.9 | 1.56 | 26.1 | 39.3 | 42.4 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t} 1,15,10}$ : | 70.3 | 1.56 | 26.7 | 34.1 | 43.0 | -8.8 | -2.0 | -6.8 |
| dLta,16,10: | 68.8 | 1.56 | 26.4 | 38.5 | 42.6 | -4.1 | -2.0 | -2.1 |
| $\mathrm{dL}_{\mathrm{t} 1,17,10}$ : | 70.3 | 1.56 | 23.5 | 39.3 | 39.8 | -0.4 | -2.0 | 1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,18,10}$ : | 70.3 | 1.56 | 26.5 | 38.5 | 42.8 | -4.3 | -2.0 | -2.3 |
| dLtit,19,10: | 70.3 | 1.56 | 26.1 | 39.6 | 42.4 | -2.8 | -2.0 | -0.7 |
| dL ${ }_{\text {t1,20,10 }}$ : | 68.8 | 1.56 | 24.6 | 32.6 | 40.8 | -8.2 | -2.0 | -6.2 |
| dLti1,21,10: | 70.3 | 1.56 | 25.0 | 39.1 | 41.4 | -2.3 | -2.0 | -0.3 |
| $\mathrm{dL}_{\mathrm{t} 1,23,10}$ : | 70.3 | 1.56 | 23.9 | 39.5 | 40.2 | -0.7 | -2.0 | 1.3 |
| dL ${ }_{\text {t1,24,10 }}$ : | 70.3 | 1.56 | 23.2 | 39.0 | 39.5 | -0.5 | -2.0 | 1.5 |
| dL ${ }_{\text {ti, 25,10 }}$ : | 71.9 | 1.56 | 24.8 | 39.9 | 41.1 | -1.2 | -2.0 | 0.8 |
| $\mathrm{dL}_{\mathrm{t} 1,26,10}$ : | 73.4 | 1.56 | 24.8 | 37.7 | 41.1 | -3.4 | -2.0 | -1.4 |
| dLti,27,10: | 70.3 | 1.56 | 22.3 | 39.3 | 38.6 | 0.7 | -2.0 | 2.7 |
| dL ${ }_{\text {ti, } 28,10}$ : | 70.3 | 1.56 | 24.1 | 38.5 | 40.4 | -1.9 | -2.0 | 0.1 |
| dL ${ }_{\text {ti } 2,29,10}$ | 68.8 | 1.56 | 24.4 | 36.4 | 40.7 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{t} 1,30,10}$ : | 70.3 | 1.56 | 26.3 | 34.5 | 42.6 | -8.1 | -2.0 | -6.1 |
| $\mathrm{dL}_{\mathrm{t} 1,31,10}$ : | 71.9 | 1.56 | 27.6 | 33.8 | 43.9 | -10.1 | -2.0 | -8.1 |
| $\mathrm{dL}_{\mathrm{t} 1,32,10}$ : | 71.9 | 1.56 | 24.2 | 37.8 | 40.5 | -2.7 | -2.0 | -0.7 |
| $\mathrm{dL}_{\mathrm{t} 1,34,10}$ : | 68.8 | 1.56 | 24.8 | 35.4 | 41.1 | -5.7 | -2.0 | -3.7 |
| dLt ${ }_{\text {t1,35,10 }}$ : | 68.8 | 1.56 | 24.4 | 39.6 | 40.6 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{\mathrm{t} 1,37,10}$ : | 70.3 | 1.56 | 24.7 | 36.4 | 41.0 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\mathrm{t} 1,38,10}$ : | 70.3 | 1.56 | 25.9 | 36.5 | 42.2 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\mathrm{t} 1,39,10}$ : | 68.8 | 1.56 | 25.3 | 35.6 | 41.5 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\mathrm{t}_{1,40,10}}$ | 68.8 | 1.56 | 27.7 | 34.7 | 43.9 | -9.2 | -2.0 | -7.2 |
| dLti1,41,10: | 71.9 | 1.56 | 24.0 | 37.4 | 40.3 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\mathrm{t} 1,42,10}$ : | 73.4 | 1.56 | 26.5 | 40.0 | 42.8 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t} 1,43,10}$ : | 70.3 | 1.56 | 25.1 | 39.1 | 41.4 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {ti,44, } 10}$ : | 70.3 | 1.56 | 25.2 | 34.1 | 41.5 | -7.4 | -2.0 | -5.4 |
| $\mathrm{dL}_{\mathrm{t} 1,45,10}$ : | 70.3 | 1.56 | 24.7 | 39.9 | 41.0 | -1.0 | -2.0 | 1.0 |
| dLti1,46,10: | 70.3 | 1.56 | 25.7 | 35.0 | 42.0 | -7.1 | -2.0 | -5.1 |
| $\mathrm{dL}_{\mathrm{t} 1,47,10}$ : | 70.3 | 1.56 | 25.2 | 37.4 | 41.5 | -4.1 | -2.0 | -2.1 |
| dL ${ }_{\text {t1,48,10 }}$ | 70.3 | 1.56 | 26.3 | 35.1 | 42.6 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\mathrm{t}_{1,49,10}}$ : | 70.3 | 1.56 | 24.7 | 38.5 | 41.0 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{\mathrm{t} 1,50,10}$ : | 70.3 | 1.56 | 23.7 | 38.2 | 40.0 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 2,6,10}$ : | 82.8 | 1.56 | 25.4 | 41.7 | 41.7 | 0.0 | -2.0 | 2.0 |
| $\mathrm{dL}_{\mathrm{t}_{2,33,10}}$ | 100.0 | 1.56 | 27.6 | 44.2 | 43.9 | 0.3 | -2.0 | 2.3 |
| dL ${ }_{\text {t } 2,36,10}$ : | 104.7 | 1.56 | 25.3 | 39.8 | 41.6 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 3,1,10}$ : | 140.6 | 1.56 | 27.9 | 41.1 | 44.2 | -3.2 | -2.0 | -1.1 |

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| $\mathrm{dL}_{\mathrm{t} 3,2,10}$ : | 142.2 | 1.56 | 28.5 | 41.5 | 44.8 | -3.3 | -2.0 | -1.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL $\mathrm{L}_{\mathbf{3}, 3,10}$ : | 140.6 | 1.56 | 27.5 | 41.6 | 43.8 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t} 3,4,10}$ : | 140.6 | 1.56 | 28.5 | 44.1 | 44.8 | -0.6 | -2.0 | 1.4 |
| dLt ${ }_{\text {3,5,10 }}$ : | 140.6 | 1.56 | 28.0 | 41.6 | 44.3 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{L}_{\mathrm{t}, 6,10}$ : | 140.6 | 1.56 | 28.5 | 39.8 | 44.8 | -5.0 | -2.0 | -3.0 |
| $\mathrm{dL}_{\mathrm{t} 3,7,10}$ : | 140.6 | 1.56 | 27.6 | 38.0 | 43.9 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\mathrm{t} 3,8,10}$ : | 139.1 | 1.56 | 29.3 | 39.5 | 45.6 | -6.1 | -2.0 | -4.1 |
| dL $\mathrm{d}_{\mathrm{t}, 10,10}$ : | 140.6 | 1.56 | 29.1 | 43.2 | 45.4 | -2.1 | -2.0 | -0.1 |
| dL ${ }_{\text {t } 3,11,10}$ : | 139.1 | 1.56 | 29.9 | 42.2 | 46.2 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\mathrm{t}, 13,10}$ : | 140.6 | 1.56 | 28.3 | 43.1 | 44.6 | -1.4 | -2.0 | 0.6 |
| dL $\mathrm{d}_{\mathrm{t}, 14,10}$ : | 142.2 | 1.56 | 28.8 | 42.6 | 45.1 | -2.5 | -2.0 | -0.4 |
| $\mathrm{dL}_{\mathrm{t}, 15,10}$ : | 140.6 | 1.56 | 29.6 | 37.5 | 45.9 | -8.4 | -2.0 | -6.4 |
| $\mathrm{dL}_{\mathrm{t}, 16,10}$ : | 140.6 | 1.56 | 29.8 | 39.7 | 46.1 | -6.4 | -2.0 | -4.4 |
| dL $\mathrm{L}_{\mathrm{t}, 17,10}$ : | 140.6 | 1.56 | 28.1 | 42.6 | 44.4 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 3,18,10}$ : | 142.2 | 1.56 | 29.6 | 38.0 | 45.9 | -7.9 | -2.0 | -5.9 |
| dL $\mathrm{d}_{\mathrm{t}, 19,10}$ : | 142.2 | 1.56 | 29.2 | 48.0 | 45.5 | 2.4 | -2.0 | 4.5 |
| $\mathrm{dL}_{\mathrm{t}, 20,10}$ : | 137.5 | 1.56 | 28.3 | 41.8 | 44.6 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{d}_{\mathrm{t}, 21,10}$ : | 140.6 | 1.56 | 28.7 | 42.7 | 45.0 | -2.3 | -2.0 | -0.3 |
| dL $\mathrm{L}_{\mathrm{t}, 22,10}$ | 139.1 | 1.56 | 29.3 | 41.8 | 45.6 | -3.9 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 3,23,10}$ : | 142.2 | 1.56 | 28.7 | 42.4 | 45.0 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{L}_{\mathrm{t}, 24,10}$ : | 140.6 | 1.56 | 28.4 | 39.6 | 44.7 | -5.1 | -2.0 | -3.1 |
| $\mathrm{dL}_{\mathrm{t} 3,25,10}$ : | 142.2 | 1.56 | 29.0 | 43.6 | 45.3 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 3,26,10}$ : | 140.6 | 1.56 | 28.2 | 42.3 | 44.5 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\mathrm{t}, 27,10}$ : | 140.6 | 1.56 | 26.8 | 44.1 | 43.1 | 1.0 | -2.0 | 3.0 |
| dL ${ }_{\text {t3,28,10 }}$ : | 140.6 | 1.56 | 28.0 | 44.4 | 44.3 | 0.1 | -2.0 | 2.1 |
| dL $\mathrm{d}_{\mathrm{t}, 29,10}$ : | 140.6 | 1.56 | 28.4 | 40.8 | 44.7 | -3.9 | -2.0 | -1.9 |
| dL ${ }_{\text {t3,31,10 }}$ : | 140.6 | 1.56 | 30.3 | 36.9 | 46.6 | -9.7 | -2.0 | -7.6 |
| dL ${ }_{\text {t3,34,10 }}$ : | 137.5 | 1.56 | 28.3 | 42.2 | 44.6 | -2.4 | -2.0 | -0.4 |
| dL ${ }_{\text {t3,36,10 }}$ : | 140.6 | 1.56 | 29.5 | 38.2 | 45.8 | -7.7 | -2.0 | -5.6 |
| $\mathrm{dL}_{\mathrm{t}, 37,10}$ : | 139.1 | 1.56 | 28.4 | 44.3 | 44.7 | -0.3 | -2.0 | 1.7 |
| dL $\mathrm{L}_{\mathrm{t}, 38,10}$ | 140.6 | 1.56 | 28.7 | 42.1 | 45.0 | -2.9 | -2.0 | -0.9 |
| dL $\mathrm{L}_{\mathrm{t}, 39,10}$ | 137.5 | 1.56 | 29.3 | 41.7 | 45.6 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 3,41,10}$ : | 140.6 | 1.56 | 28.7 | 43.2 | 45.0 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t}, 42,10}$ : | 142.2 | 1.56 | 30.4 | 44.0 | 46.8 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{d}_{\mathrm{t}, 43,10}$ : | 142.2 | 1.56 | 28.5 | 41.8 | 44.8 | -3.0 | -2.0 | -1.0 |
| dL $\mathrm{L}_{\mathrm{t}, 44,10}$ : | 140.6 | 1.56 | 29.0 | 37.4 | 45.3 | -7.9 | -2.0 | -5.9 |
| $\mathrm{dL}_{\mathrm{t} 3,45,10}$ : | 142.2 | 1.56 | 28.6 | 43.1 | 44.9 | -1.8 | -2.0 | 0.3 |
| dL ${ }_{\text {t }}$ d 47,10 : | 140.6 | 1.56 | 28.6 | 38.7 | 44.9 | -6.2 | -2.0 | -4.2 |
| dL ${ }_{\text {t }}$, 48,10: | 140.6 | 1.56 | 29.6 | 41.1 | 45.9 | -4.8 | -2.0 | -2.8 |
| $\mathrm{dL}_{\mathrm{i} 3,49,10}$ : | 142.2 | 1.56 | 28.2 | 41.3 | 44.5 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t} 3,50,10}$ : | 140.6 | 1.56 | 27.9 | 36.7 | 44.2 | -7.5 | -2.0 | -5.5 |
| dL ${ }_{\text {t } 4,9,10}$ : | 175.0 | 1.56 | 27.5 | 39.8 | 43.8 | -3.9 | -2.0 | -1.9 |
| dLt4,12,10: | 175.0 | 1.56 | 28.1 | 41.2 | 44.4 | -3.1 | -2.0 | -1.1 |
| dL ${ }_{4}$, 30,10: | 175.0 | 1.56 | 29.3 | 41.8 | 45.6 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{44,32,10}$ : | 175.0 | 1.56 | 28.1 | 43.2 | 44.4 | -1.2 | -2.0 | 0.9 |
| $\mathrm{dL}_{\mathrm{t} 4,33,10}$ : | 175.0 | 1.56 | 28.3 | 40.6 | 44.7 | -4.1 | -2.0 | -2.1 |
| $\mathrm{dL}_{\mathrm{t} 4,35,10}$ : | 175.0 | 1.56 | 28.2 | 39.4 | 44.5 | -5.1 | -2.0 | -3.0 |
| dLt4,40,10: | 175.0 | 1.56 | 30.4 | 37.1 | 46.7 | -9.6 | -2.0 | -7.6 |
| $\mathrm{dL}_{\text {t5,5,10: }}$ | 232.8 | 1.56 | 28.6 | 35.5 | 45.0 | -9.5 | -2.1 | -7.5 |
| $\mathrm{dL}_{\text {t5,9,10 }}$ : | 232.8 | 1.56 | 27.7 | 34.0 | 44.1 | -10.2 | -2.1 | -8.1 |
| dL ${ }_{\text {t5,13,10 }}$ | 232.8 | 1.56 | 28.6 | 35.4 | 45.0 | -9.6 | -2.1 | -7.6 |
| $\mathrm{dL}_{\text {t5,24,10 }}$ : | 232.8 | 1.56 | 29.1 | 35.5 | 45.5 | -10.0 | -2.1 | -7.9 |
| dL ${ }_{\text {t5,27,10: }}$ | 232.8 | 1.56 | 28.3 | 34.4 | 44.7 | -10.3 | -2.1 | -8.2 |
| dL ${ }_{\text {t5,30,10 }}$ : | 232.8 | 1.56 | 28.7 | 35.8 | 45.2 | -9.4 | -2.1 | -7.3 |

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| dL ${ }_{\text {t5,32,10 }}$ : | 232.8 | 1.56 | 28.0 | 34.5 | 44.5 | -9.9 | -2.1 | -7.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t5,33,10: }}$ | 232.8 | 1.56 | 28.3 | 35.0 | 44.8 | -9.7 | -2.1 | -7.7 |
| $\mathrm{dL}_{\text {t5,41,10: }}$ | 232.8 | 1.56 | 28.6 | 36.6 | 45.0 | -8.4 | -2.1 | -6.4 |
| dLt5,42,10: | 232.8 | 1.56 | 30.2 | 36.5 | 46.7 | -10.2 | -2.1 | -8.2 |
| dL ${ }_{\text {t6,5,10 }}$ : | 309.4 | 1.56 | 28.0 | 35.8 | 44.5 | -8.7 | -2.1 | -6.6 |
| $\mathrm{dL}_{16,7,10}$ : | 307.8 | 1.56 | 27.2 | 37.2 | 43.7 | -6.6 | -2.1 | -4.5 |
| dL $\mathrm{t}_{6,32,10}$ : | 325.0 | 1.56 | 26.5 | 35.2 | 43.1 | -7.9 | -2.1 | -5.8 |
| dL $\mathrm{t}_{6,44,10}$ : | 325.0 | 1.56 | 28.9 | 39.6 | 45.5 | -5.9 | -2.1 | -3.8 |
| dLtt, ${ }^{\text {d }}$ /10: | 7986.4 | 1.56 | -17.2 | -11.2 | 12.1 | -23.2 | -5.0 | -18.2 |
| dL ${ }_{\text {t7,43,10 }}$ | 7944.2 | 1.56 | -16.9 | -10.8 | 12.4 | -23.2 | -5.0 | -18.2 |
| dL $\mathrm{t}_{7,45,10}$ : | 8000.5 | 1.56 | -16.6 | -10.5 | 12.7 | -23.1 | -5.0 | -18.1 |

BIN 10: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{T}$ | dLtn,j,k | $\mathrm{f}_{T}$ | dLtn,j,k | $\mathrm{f}_{T}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{T}$ | dL ${ }_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{T}$ | dL ${ }_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{T}$ | dL ${ }_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [ Hz ] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -1.8 | --- | --- | 140.6 | -3.2 | --- | --- | --- | --- | --- | --- |
| 2 | 70.3 | -2.7 | --- | --- | 142.2 | -3.3 | --- | --- | --- | --- | --- | --- |
| 3 | 70.3 | 0.3 | --- | --- | 140.6 | -2.2 | --- | --- | --- | --- | --- | --- |
| 4 | 70.3 | 0.2 | --- | --- | 140.6 | -0.6 | --- | --- | --- | --- | --- | --- |
| 5 | 70.3 | -1.9 | --- | --- | 140.6 | -2.7 | --- | --- | 232.8 | -9.5 | 309.4 | -8.7 |
| 6 | 82.8 | 0.0 | 82.8 | 0.0 | 140.6 | -5.0 | --- | --- | --- | --- | --- | --- |
| 7 | 71.9 | -4.7 | --- | --- | 140.6 | -5.9 | --- | --- | --- | --- | 307.8 | -6.6 |
| 8 | 68.8 | -6.3 | --- | --- | 139.1 | -6.1 | --- | --- | --- | --- | --- | --- |
| 9 | 68.8 | -9.9 | --- | --- | --- | --- | 175.0 | -3.9 | 232.8 | -10.2 | --- | --- |
| 10 | 70.3 | -2.4 | --- | --- | 140.6 | -2.1 | --- | --- | --- | --- | --- | --- |
| 11 | 73.4 | -9.8 | --- | --- | 139.1 | -4.0 | --- | --- | --- | --- | --- | --- |
| 12 | 68.8 | -5.4 | --- | --- | --- | --- | 175.0 | -3.1 | --- | --- | --- | --- |
| 13 | 70.3 | -2.2 | --- | --- | 140.6 | -1.4 | --- | --- | 232.8 | -9.6 | --- | --- |
| 14 | 71.9 | -3.1 | --- | --- | 142.2 | -2.5 | --- | --- | --- | --- | --- | --- |
| 15 | 70.3 | -8.8 | --- | --- | 140.6 | -8.4 | --- | --- | --- | --- | --- | --- |
| 16 | 68.8 | -4.1 | --- | --- | 140.6 | -6.4 | --- | --- | --- | --- | --- | --- |
| 17 | 70.3 | -0.4 | --- | --- | 140.6 | -1.8 | --- | --- | --- | --- | --- | --- |
| 18 | 70.3 | -4.3 | --- | --- | 142.2 | -7.9 | --- | --- | --- | --- | --- | --- |
| 19 | 70.3 | -2.8 | --- | --- | 142.2 | 2.4 | --- | --- | --- | --- | --- | --- |
| 20 | 68.8 | -8.2 | --- | --- | 137.5 | -2.8 | --- | --- | --- | --- | --- | --- |
| 21 | 70.3 | -2.3 | --- | --- | 140.6 | -2.3 | --- | --- | --- | --- | --- | --- |
| 22 | --- | --- | --- | --- | 139.1 | -3.9 | --- | --- | --- | --- | --- | --- |
| 23 | 70.3 | -0.7 | --- | --- | 142.2 | -2.6 | --- | --- | --- | --- | --- | --- |
| 24 | 70.3 | -0.5 | --- | --- | 140.6 | -5.1 | --- | --- | 232.8 | -10.0 | --- | --- |
| 25 | 71.9 | -1.2 | --- | --- | 142.2 | -1.6 | --- | --- | --- | --- | --- | --- |
| 26 | 73.4 | -3.4 | --- | --- | 140.6 | -2.2 | --- | --- | --- | --- | --- | --- |
| 27 | 70.3 | 0.7 | --- | --- | 140.6 | 1.0 | --- | --- | 232.8 | -10.3 | --- | --- |
| 28 | 70.3 | -1.9 | --- | --- | 140.6 | 0.1 | --- | --- | --- | --- | --- | --- |
| 29 | 68.8 | -4.3 | --- | --- | 140.6 | -3.9 | --- | --- | --- | --- | --- | --- |
| 30 | 70.3 | -8.1 | --- | --- | --- | --- | 175.0 | -3.9 | 232.8 | -9.4 | --- | --- |
| 31 | 71.9 | -10.1 | --- | --- | 140.6 | -9.7 | --- | --- | --- | --- | --- | --- |
| 32 | 71.9 | -2.7 | --- | --- | --- | --- | 175.0 | -1.2 | 232.8 | -9.9 | 325.0 | -7.9 |
| 33 | --- | --- | 100.0 | 0.3 | --- | --- | 175.0 | -4.1 | 232.8 | -9.7 | --- | --- |
| 34 | 68.8 | -5.7 | --- | --- | 137.5 | -2.4 | --- | --- | --- | --- | --- | --- |
| 35 | 68.8 | -1.0 | --- | --- | --- | --- | 175.0 | -5.1 | --- | --- | --- | --- |
| 36 | --- | --- | 104.7 | -1.8 | 140.6 | -7.7 | --- | --- | --- | --- | --- | --- |
| 37 | 70.3 | -4.5 | --- | --- | 139.1 | -0.3 | --- | --- | --- | --- | --- | --- |
| 38 | 70.3 | -5.7 | --- | --- | 140.6 | -2.9 | --- | --- | --- | --- | --- | --- |
| 39 | 68.8 | -5.9 | --- | --- | 137.5 | -3.8 | --- | --- | --- | --- | --- | --- |

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| 40 | 68.8 | -9.2 | --- | --- | --- | --- | 175.0 | -9.6 | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41 | 71.9 | -2.9 | --- | --- | 140.6 | -1.8 | --- | --- | 232.8 | -8.4 | --- | --- |
| 42 | 73.4 | -2.8 | --- | --- | 142.2 | -2.7 | --- | --- | 232.8 | -10.2 | --- | --- |
| 43 | 70.3 | -2.2 | --- | --- | 142.2 | -3.0 | --- | --- | --- | --- | --- | --- |
| 44 | 70.3 | -7.4 | --- | --- | 140.6 | -7.9 | --- | --- | --- | --- | 325.0 | -5.9 |
| 45 | 70.3 | -1.0 | --- | --- | 142.2 | -1.8 | --- | --- | --- | --- | --- | --- |
| 46 | 70.3 | -7.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 47 | 70.3 | -4.1 | --- | --- | 140.6 | -6.2 | --- | --- | --- | --- | --- | --- |
| 48 | 70.3 | -7.5 | --- | --- | 140.6 | -4.8 | --- | --- | --- | --- | --- | --- |
| 49 | 70.3 | -2.5 | --- | --- | 142.2 | -3.1 | --- | --- | --- | --- | --- | --- |
| 50 | 70.3 | -1.8 | --- | --- | 140.6 | -7.5 | --- | --- | --- | --- | --- | --- |
| $\mathrm{ft}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 70.6 | -3.3 | 99.8 | -11.2 | 140.6 | -3.6 | 175.0 | -11.1 | 232.8 | -14.0 | 310.0 | -14.5 |
| La[dB] |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| dLa,k[dB] |  | -1.3 |  | -9.2 |  | -1.5 |  | -9.1 |  | -12.0 |  | -12.4 |
| $\mathrm{K}_{\text {tN }}[\mathrm{dB}$ ] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

BIN 10: Narrowband spectrum



BIN 10: Narrowband spectrum


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| BIN 10.5: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | $\mathrm{L}_{\text {pn,avg,j,k }}$ | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{prn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj,j}, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dL ${ }_{\text {t1,1,10.5: }}$ | 70.3 | 1.56 | 24.1 | 38.1 | 40.4 | -2.3 | -2.0 | -0.3 |
| dL $\mathrm{Lt} 1,2,10.5$ | 70.3 | 1.56 | 25.3 | 37.3 | 41.6 | -4.4 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{t} 1,3,10,5}$ : | 75.0 | 1.56 | 24.8 | 39.6 | 41.2 | -1.5 | -2.0 | 0.5 |
| $\mathrm{dL}_{\mathrm{t} 1,4,10.5}$ : | 68.8 | 1.56 | 23.6 | 37.8 | 39.9 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\mathrm{t} 1,5,10.5}$ : | 68.8 | 1.56 | 23.8 | 34.1 | 40.0 | -5.9 | -2.0 | -3.9 |
| dL $\mathrm{Lt} 1,6,10.5$ | 68.8 | 1.56 | 24.6 | 33.5 | 40.8 | -7.3 | -2.0 | -5.3 |
| $\mathrm{dL}_{\mathrm{t} 1,7,10.5}$ : | 68.8 | 1.56 | 24.9 | 37.6 | 41.1 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\mathrm{t} 1,8,10.5}$ : | 70.3 | 1.56 | 24.0 | 34.8 | 40.3 | -5.5 | -2.0 | -3.5 |
| $\mathrm{dL}_{\mathrm{t} 1,9,10.5}$ : | 82.8 | 1.56 | 24.3 | 39.2 | 40.5 | -1.2 | -2.0 | 0.8 |
| $\mathrm{dL}_{\text {t1, 10,10.5: }}$ | 82.8 | 1.56 | 26.7 | 34.0 | 43.0 | -9.0 | -2.0 | -7.0 |
| dLti,11,10.5: | 82.8 | 1.56 | 23.6 | 35.4 | 40.0 | -4.6 | -2.0 | -2.5 |
| $\mathrm{dL}_{\mathrm{t}_{1,12,10.5}}$ | 68.8 | 1.56 | 25.1 | 33.2 | 41.3 | -8.2 | -2.0 | -6.2 |
| $\mathrm{dL}_{\mathrm{t}_{1} 14,10.5}$ | 68.8 | 1.56 | 25.8 | 36.6 | 42.1 | -5.5 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t}, 15,10.5}$ | 68.8 | 1.56 | 25.1 | 35.0 | 41.3 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\text {t1,16,10.5: }}$ | 68.8 | 1.56 | 23.5 | 36.3 | 39.7 | -3.5 | -2.0 | -1.5 |
| dLti,17,10.5: | 68.8 | 1.56 | 23.9 | 36.3 | 40.1 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\text {t1, 18,10.5: }}$ | 70.3 | 1.56 | 23.3 | 37.2 | 39.6 | -2.4 | -2.0 | -0.4 |
| dLti,19,10.5: | 70.3 | 1.56 | 26.1 | 39.2 | 42.4 | -3.2 | -2.0 | -1.2 |
| $\mathrm{dL}_{\text {t1,20,10.5: }}$ | 70.3 | 1.56 | 25.8 | 33.3 | 42.1 | -8.8 | -2.0 | -6.8 |
| $\mathrm{dL}_{11,21,10.5}$ | 70.3 | 1.56 | 24.6 | 35.7 | 40.9 | -5.2 | -2.0 | -3.2 |
| $\mathrm{dL}_{\text {t1,22,10.5: }}$ | 73.4 | 1.56 | 26.7 | 37.4 | 43.0 | -5.5 | -2.0 | -3.5 |
| $\mathrm{dL}_{\text {t1, 23,10.5: }}$ | 70.3 | 1.56 | 23.0 | 34.1 | 39.3 | -5.2 | -2.0 | -3.2 |
| dLti,24,10.5: | 70.3 | 1.56 | 24.6 | 33.3 | 40.9 | -7.6 | -2.0 | -5.6 |
| dLti,25,10.5: | 68.8 | 1.56 | 24.1 | 34.0 | 40.3 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\text {t1,26,10.5: }}$ | 68.8 | 1.56 | 23.5 | 35.8 | 39.7 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{\text {t1, 27,10.5: }}$ | 68.8 | 1.56 | 24.1 | 36.7 | 40.3 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\text {t1, 28,10.5: }}$ | 68.8 | 1.56 | 25.2 | 35.1 | 41.4 | -6.3 | -2.0 | -4.3 |
| dLti,29,10.5: | 68.8 | 1.56 | 25.4 | 31.8 | 41.6 | -9.8 | -2.0 | -7.8 |
| dLti,30,10.5: | 68.8 | 1.56 | 24.8 | 36.2 | 41.0 | -4.8 | -2.0 | -2.8 |
| $\mathrm{dL}_{\text {t1,31,10.5: }}$ | 70.3 | 1.56 | 22.7 | 36.8 | 39.0 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\text {t1,32,10.5: }}$ | 68.8 | 1.56 | 20.9 | 34.6 | 37.1 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{\text {t1,33,10.5: }}$ | 68.8 | 1.56 | 21.6 | 35.4 | 37.8 | -2.4 | -2.0 | -0.4 |
| dLti,34,10.5: | 68.8 | 1.56 | 22.3 | 37.1 | 38.5 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t1,35,10.5: }}$ | 68.8 | 1.56 | 22.7 | 36.8 | 38.9 | -2.2 | -2.0 | -0.2 |
| dLti,36,10.5: | 70.3 | 1.56 | 24.7 | 33.4 | 41.0 | -7.6 | -2.0 | -5.6 |
| dLti,37,10.5: | 70.3 | 1.56 | 25.2 | 35.3 | 41.5 | -6.3 | -2.0 | -4.3 |
| $\mathrm{dL}_{\text {t1,38,10.5: }}$ | 68.8 | 1.56 | 24.7 | 33.8 | 40.9 | -7.2 | -2.0 | -5.2 |
| $\mathrm{dL}_{\text {t1, } 39,10.5}$ : | 68.8 | 1.56 | 26.2 | 33.5 | 42.4 | -9.0 | -2.0 | -7.0 |
| $\mathrm{dL}_{\text {t1,42,10.5: }}$ | 68.8 | 1.56 | 24.9 | 33.2 | 41.1 | -7.9 | -2.0 | -5.9 |
| $\mathrm{dL}_{\text {t1,43,10.5: }}$ | 70.3 | 1.56 | 25.1 | 38.7 | 41.4 | -2.7 | -2.0 | -0.7 |
| dLti,44,10.5: | 68.8 | 1.56 | 22.2 | 38.3 | 38.4 | -0.1 | -2.0 | 1.9 |
| $\mathrm{dL}_{\text {t1,45,10.5: }}$ | 68.8 | 1.56 | 21.9 | 38.2 | 38.1 | 0.1 | -2.0 | 2.1 |
| $\mathrm{dL}_{\text {t1,46,10.5: }}$ | 68.8 | 1.56 | 25.4 | 33.7 | 41.6 | -7.9 | -2.0 | -5.9 |
| $\mathrm{dL}_{\mathrm{t}_{1}, 47,10.5}$ | 68.8 | 1.56 | 24.1 | 35.4 | 40.4 | -5.0 | -2.0 | -3.0 |
| dLti,48,10.5: | 68.8 | 1.56 | 23.5 | 35.5 | 39.7 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t1,49,10,5: }}$ | 68.8 | 1.56 | 24.9 | 34.8 | 41.2 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{11,50,10.5}$ | 71.9 | 1.56 | 27.7 | 35.8 | 44.0 | -8.2 | -2.0 | -6.2 |
| dLt1,51,10.5: | 68.8 | 1.56 | 24.9 | 35.9 | 41.1 | -5.2 | -2.0 | -3.2 |
| dL ${ }_{\text {11,52,10.5: }}$ | 68.8 | 1.56 | 23.0 | 37.0 | 39.3 | -2.3 | -2.0 | -0.3 |
| dLti,53,10.5: | 73.4 | 1.56 | 26.0 | 35.9 | 42.3 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{11,54,10.5}$ | 68.8 | 1.56 | 23.5 | 34.6 | 39.7 | -5.1 | -2.0 | -3.1 |

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| $\mathrm{dL}_{\text {t1,55,10.5 }}$ | 68.8 | 1.56 | 22.9 | 35.0 | 39.1 | -4.1 | -2.0 | -2.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLtı,56,10.5: | 68.8 | 1.56 | 24.7 | 37.2 | 40.9 | -3.7 | -2.0 | -1.7 |
| $\mathrm{dL}_{\text {t1,57,10.5: }}$ | 70.3 | 1.56 | 24.3 | 31.2 | 40.6 | -9.4 | -2.0 | -7.4 |
| dLti,58,10.5: | 68.8 | 1.56 | 24.8 | 33.7 | 41.0 | -7.2 | -2.0 | -5.2 |
| $\mathrm{dL}_{\text {t1,59,10.5: }}$ | 70.3 | 1.56 | 25.3 | 37.1 | 41.6 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{11,60,10.5}$ | 68.8 | 1.56 | 25.2 | 34.6 | 41.5 | -6.9 | -2.0 | -4.9 |
| $\mathrm{dL}_{\mathrm{t}_{1,61,10.5} \text { : }}$ | 70.3 | 1.56 | 25.5 | 33.5 | 41.8 | -8.2 | -2.0 | -6.2 |
| $\mathrm{dL}_{\text {t1,62,10.5: }}$ | 68.8 | 1.56 | 25.9 | 32.1 | 42.1 | -10.0 | -2.0 | -8.0 |
| dLti1,64,10.5: | 68.8 | 1.56 | 22.1 | 36.1 | 38.4 | -2.2 | -2.0 | -0.2 |
| $\mathrm{dL}_{\text {t1,65,10.5 }}$ | 68.8 | 1.56 | 22.4 | 38.9 | 38.7 | 0.2 | -2.0 | 2.2 |
| $\mathrm{dL}_{\text {t1,66,10.5: }}$ | 70.3 | 1.56 | 27.7 | 36.0 | 44.0 | -8.0 | -2.0 | -6.0 |
| $\mathrm{dL}_{\text {11,67,10.5: }}$ | 70.3 | 1.56 | 26.0 | 33.7 | 42.3 | -8.6 | -2.0 | -6.6 |
| $\mathrm{dL}_{\text {11,68,10.5 }}$ | 68.8 | 1.56 | 25.4 | 34.0 | 41.6 | -7.7 | -2.0 | -5.7 |
| dLti,69,10.5: | 70.3 | 1.56 | 26.4 | 33.8 | 42.7 | -8.9 | -2.0 | -6.9 |
| $\mathrm{dL}_{\text {t1,70,10.5: }}$ | 70.3 | 1.56 | 25.5 | 37.0 | 41.8 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\text {t1,71,10.5: }}$ | 70.3 | 1.56 | 25.4 | 37.2 | 41.7 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{11,72,10.5}$ | 70.3 | 1.56 | 25.5 | 35.9 | 41.8 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\mathrm{t} 2,1,10.5}$ : | 140.6 | 1.56 | 28.6 | 42.5 | 44.9 | -2.4 | -2.0 | -0.4 |
| dLti2, 210.5 : | 140.6 | 1.56 | 28.5 | 36.0 | 44.8 | -8.7 | -2.0 | -6.7 |
| $\mathrm{dL}_{\mathrm{t} 2,3,10.5}$ : | 140.6 | 1.56 | 28.8 | 38.3 | 45.1 | -6.8 | -2.0 | -4.8 |
| dLt ${ }_{\text {L2,5,10.5: }}$ | 140.6 | 1.56 | 27.2 | 40.4 | 43.5 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\mathrm{t} 2,8,10.5}$ : | 140.6 | 1.56 | 27.4 | 43.4 | 43.7 | -0.3 | -2.0 | 1.7 |
| $\mathrm{dL}_{\mathrm{t} 2,11,10.5}$ | 139.1 | 1.56 | 27.3 | 42.3 | 43.6 | -1.3 | -2.0 | 0.7 |
| $\mathrm{dL}_{\mathrm{t}, 12,10.5}$ | 132.8 | 1.56 | 28.1 | 40.0 | 44.4 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{\mathrm{t}, 13,10,5}$ | 134.4 | 1.56 | 27.7 | 41.3 | 44.0 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{Lt}_{2,14,10.5}$ | 137.5 | 1.56 | 28.3 | 41.8 | 44.6 | -2.8 | -2.0 | -0.7 |
| $\mathrm{dL}_{\mathrm{t}, 15,10.5}$ | 137.5 | 1.56 | 27.6 | 36.3 | 43.9 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\mathrm{t}_{2,18,10,5} \text { : }}$ | 140.6 | 1.56 | 27.3 | 41.1 | 43.6 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{\mathrm{t} 2,19,10.5}$ | 140.6 | 1.56 | 29.6 | 43.1 | 45.9 | -2.8 | -2.0 | -0.8 |
| $\mathrm{dL}_{\mathrm{t} 2,20,10.5}$ : | 140.6 | 1.56 | 29.6 | 41.1 | 45.9 | -4.8 | -2.0 | -2.8 |
| dLti2,21,10.5: | 140.6 | 1.56 | 28.6 | 44.1 | 44.9 | -0.8 | -2.0 | 1.2 |
| dL $\mathrm{L}_{\mathrm{t}, 22,10.5}$ | 140.6 | 1.56 | 30.0 | 40.9 | 46.3 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t}_{2}, 23,10,5}$ | 139.1 | 1.56 | 27.3 | 35.7 | 43.6 | -7.9 | -2.0 | -5.8 |
| $\mathrm{dL}_{\mathrm{t} 2,24,10.5}$ | 140.6 | 1.56 | 28.5 | 40.4 | 44.8 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\mathrm{t} 2,25,10.5}$ | 137.5 | 1.56 | 27.8 | 37.2 | 44.1 | -6.9 | -2.0 | -4.8 |
| dLti2,28,10.5: | 135.9 | 1.56 | 27.9 | 39.0 | 44.2 | -5.2 | -2.0 | -3.1 |
| $\mathrm{dL}_{\mathrm{t}, 29,10.5}$ | 135.9 | 1.56 | 28.3 | 43.8 | 44.6 | -0.8 | -2.0 | 1.2 |
| dLti2,30,10,5: | 135.9 | 1.56 | 28.2 | 43.2 | 44.5 | -1.3 | -2.0 | 0.7 |
| dL $\mathrm{Lt}_{2,32,10.5}$ | 135.9 | 1.56 | 25.4 | 40.4 | 41.7 | -1.2 | -2.0 | 0.8 |
| $\mathrm{dL}_{\mathrm{t} 2,33,10.5}$ | 139.1 | 1.56 | 25.4 | 41.4 | 41.7 | -0.4 | -2.0 | 1.7 |
| $\mathrm{dL}_{\mathrm{t} 2,34,10.5}$ | 137.5 | 1.56 | 26.6 | 41.7 | 42.9 | -1.1 | -2.0 | 0.9 |
| $\mathrm{dL}_{\mathrm{t} 2,36,10,5}$ | 139.1 | 1.56 | 27.9 | 38.1 | 44.2 | -6.1 | -2.0 | -4.1 |
| dL $\mathrm{L}_{2,37,10.5 \text { : }}$ | 140.6 | 1.56 | 29.1 | 40.4 | 45.4 | -5.0 | -2.0 | -3.0 |
| dLti2,40,10.5: | 139.1 | 1.56 | 29.5 | 37.2 | 45.8 | -8.7 | -2.0 | -6.7 |
| $\mathrm{dL}_{\mathrm{t} 2,41,10.5}$ | 139.1 | 1.56 | 29.6 | 39.8 | 45.9 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\mathrm{L} 2,43,10.5}$ | 142.2 | 1.56 | 29.2 | 43.6 | 45.5 | -2.0 | -2.0 | 0.0 |
| $\mathrm{dL}_{\mathrm{t} 2,49,10.5}$ | 139.1 | 1.56 | 28.3 | 38.0 | 44.6 | -6.6 | -2.0 | -4.6 |
| dLt ${ }_{\text {t2,51,10.5: }}$ | 137.5 | 1.56 | 28.2 | 38.4 | 44.5 | -6.2 | -2.0 | -4.2 |
| $\mathrm{dL}_{\mathrm{L} 2,53,10.5}$ | 140.6 | 1.56 | 28.9 | 41.4 | 45.2 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 2,54,10.5}$ | 135.9 | 1.56 | 26.8 | 42.1 | 43.1 | -1.0 | -2.0 | 1.0 |
| dLti2,55,10.5: | 140.6 | 1.56 | 27.3 | 38.3 | 43.6 | -5.4 | -2.0 | -3.3 |
| $\mathrm{dL}_{\mathrm{t} 2,57,10.5}$ : | 139.1 | 1.56 | 27.7 | 41.7 | 44.0 | -2.3 | -2.0 | -0.3 |
| dLti2,59,10,5: | 140.6 | 1.56 | 28.2 | 40.9 | 44.5 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\mathrm{L} 2,60,10,5}$ | 137.5 | 1.56 | 28.0 | 40.8 | 44.3 | -3.5 | -2.0 | -1.5 |

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| $\mathrm{dL}_{\text {t2,62,10.5: }}$ | 137.5 | 1.56 | 28.9 | 38.1 | 45.2 | -7.2 | -2.0 | -5.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t2,63,10.5: }}$ | 140.6 | 1.56 | 30.7 | 39.6 | 47.0 | -7.4 | -2.0 | -5.3 |
| dL ${ }_{\text {L2, } 24,10.5}$ : | 137.5 | 1.56 | 26.3 | 38.8 | 42.6 | -3.8 | -2.0 | -1.8 |
| dL ${ }_{\text {t2,65,10.5: }}$ | 137.5 | 1.56 | 26.8 | 41.1 | 43.1 | -1.9 | -2.0 | 0.1 |
| $\mathrm{dL}_{\text {t2,67,10.5: }}$ | 140.6 | 1.56 | 29.9 | 43.2 | 46.2 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\text {t2,68,10.5: }}$ | 137.5 | 1.56 | 29.1 | 41.8 | 45.4 | -3.6 | -2.0 | -1.6 |
| $\mathrm{dL}_{\text {t2, } 70,10.5}$ : | 140.6 | 1.56 | 28.7 | 38.5 | 45.0 | -6.5 | -2.0 | -4.4 |
| $\mathrm{dL}_{\text {t2, 71,10.5: }}$ | 142.2 | 1.56 | 29.0 | 40.9 | 45.3 | -4.4 | -2.0 | -2.4 |
| dL ${ }_{\text {L2,72,10.5: }}$ | 142.2 | 1.56 | 29.1 | 38.5 | 45.4 | -6.9 | -2.0 | -4.9 |
| $\mathrm{dL}_{\text {t2, 73,10.5: }}$ | 139.1 | 1.56 | 28.5 | 38.0 | 44.8 | -6.8 | -2.0 | -4.8 |
| $\mathrm{dL}_{\text {ti,4,10.5: }}$ | 175.0 | 1.56 | 27.3 | 39.9 | 43.6 | -3.7 | -2.0 | -1.7 |
| dL ${ }_{\text {t3,6,10.5: }}$ | 175.0 | 1.56 | 27.3 | 38.8 | 43.6 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{13,7,10,5}$ | 175.0 | 1.56 | 28.4 | 36.9 | 44.7 | -7.8 | -2.0 | -5.8 |
| dL $\mathrm{L}_{3,9,10,5 \text { : }}$ | 175.0 | 1.56 | 28.3 | 39.0 | 44.6 | -5.6 | -2.0 | -3.6 |
| $\mathrm{dL}_{\text {L3, 10,10.5: }}$ | 175.0 | 1.56 | 28.6 | 41.7 | 44.9 | -3.3 | -2.0 | -1.2 |
| $\mathrm{dL}_{\text {t3,16,10.5: }}$ | 175.0 | 1.56 | 27.0 | 40.7 | 43.3 | -2.7 | -2.0 | -0.6 |
| $\mathrm{dL}_{\text {ti, 17,10.5: }}$ | 175.0 | 1.56 | 27.8 | 34.2 | 44.1 | -9.9 | -2.0 | -7.9 |
| $\mathrm{dL}_{\text {L3, 26,10.5: }}$ | 175.0 | 1.56 | 28.0 | 39.2 | 44.3 | -5.1 | -2.0 | -3.1 |
| dL $\mathrm{L}_{3,27,10.5}$ | 175.0 | 1.56 | 27.3 | 41.2 | 43.6 | -2.5 | -2.0 | -0.4 |
| dL ${ }_{\text {ti,31,10.5: }}$ | 175.0 | 1.56 | 27.4 | 39.1 | 43.7 | -4.6 | -2.0 | -2.6 |
| dL ${ }_{\text {L3,35,10.5: }}$ | 175.0 | 1.56 | 27.6 | 40.7 | 43.9 | -3.1 | -2.0 | -1.1 |
| $\mathrm{dL}_{\text {L3,38,10.5: }}$ | 175.0 | 1.56 | 28.0 | 40.6 | 44.3 | -3.6 | -2.0 | -1.6 |
| dL $\mathrm{L}_{3,39,10.5}$ : | 175.0 | 1.56 | 28.9 | 37.7 | 45.2 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\text {t3,42,10.5: }}$ | 175.0 | 1.56 | 28.2 | 39.7 | 44.5 | -4.9 | -2.0 | -2.8 |
| dL $\mathrm{L}_{3,44,10.5}$ : | 175.0 | 1.56 | 26.8 | 42.1 | 43.1 | -1.1 | -2.0 | 1.0 |
| dL $\mathrm{L}_{3,45,10.5}$ : | 175.0 | 1.56 | 26.1 | 42.0 | 42.4 | -0.4 | -2.0 | 1.6 |
| dL ${ }_{\text {I } 3,46,10.5}$ : | 175.0 | 1.56 | 28.0 | 39.0 | 44.3 | -5.3 | -2.0 | -3.3 |
| dL $\mathrm{L}_{3,47,10.5}$ : | 175.0 | 1.56 | 27.8 | 37.8 | 44.1 | -6.3 | -2.0 | -4.3 |
| $\mathrm{dL}_{\text {t3,48,10.5: }}$ | 175.0 | 1.56 | 27.3 | 40.5 | 43.6 | -3.1 | -2.0 | -1.0 |
| $\mathrm{dL}_{\text {t3,52,10.5: }}$ | 175.0 | 1.56 | 28.0 | 40.2 | 44.3 | -4.1 | -2.0 | -2.0 |
| dL ${ }_{\text {+3,56,10,5 }}$ | 175.0 | 1.56 | 27.9 | 40.6 | 44.2 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {L3,58,10.5: }}$ | 175.0 | 1.56 | 27.9 | 37.7 | 44.2 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\text {ti,61,10.5: }}$ | 175.0 | 1.56 | 28.6 | 39.1 | 44.9 | -5.8 | -2.0 | -3.8 |
| $\mathrm{dL}_{\text {L3,66,10.5: }}$ | 175.0 | 1.56 | 30.2 | 37.8 | 46.5 | -8.7 | -2.0 | -6.7 |
| $\mathrm{dL}_{\text {t4,5,10.5: }}$ | 232.8 | 1.56 | 27.2 | 33.5 | 43.6 | -10.2 | -2.1 | -8.1 |
| dL $\mathrm{t}_{4,6,10,5:}$ | 232.8 | 1.56 | 26.9 | 33.6 | 43.4 | -9.7 | -2.1 | -7.7 |
| $\mathrm{dL}_{\text {t4, } 7,10.5}$ : | 232.8 | 1.56 | 28.1 | 35.4 | 44.5 | -9.1 | -2.1 | -7.0 |
| dL $\mathrm{Lt}_{4,8,10.5}$ : | 232.8 | 1.56 | 27.6 | 34.1 | 44.0 | -10.0 | -2.1 | -7.9 |
| dL $\mathrm{Lt}_{4,9,10,5:}$ | 232.8 | 1.56 | 28.0 | 35.4 | 44.4 | -8.9 | -2.1 | -6.9 |
| $\mathrm{dL}_{44,13,10.5}$ : | 232.8 | 1.56 | 27.3 | 34.5 | 43.8 | -9.3 | -2.1 | -7.2 |
| dL $\mathrm{t}_{4,16,10.5}$ : | 232.8 | 1.56 | 26.3 | 33.0 | 42.7 | -9.7 | -2.1 | -7.6 |
| $\mathrm{dL}_{\text {t4, 17,10.5: }}$ | 232.8 | 1.56 | 27.7 | 35.3 | 44.1 | -8.8 | -2.1 | -6.8 |
| dL ${ }_{\text {t4, } 21,10,5 \text { : }}$ | 232.8 | 1.56 | 29.1 | 35.3 | 45.6 | -10.2 | -2.1 | -8.2 |
| dLtit, 28,10.5: | 232.8 | 1.56 | 27.6 | 34.8 | 44.0 | -9.2 | -2.1 | -7.2 |
| $\mathrm{dL}_{\text {t4, 29,10.5: }}$ | 232.8 | 1.56 | 27.8 | 34.9 | 44.3 | -9.4 | -2.1 | -7.3 |
| dL ${ }_{\text {t4,31,10.5: }}$ | 232.8 | 1.56 | 27.3 | 35.2 | 43.7 | -8.5 | -2.1 | -6.4 |
| dL ${ }_{\text {t4, } 33,10.5}$ : | 232.8 | 1.56 | 26.4 | 32.9 | 42.8 | -10.0 | -2.1 | -7.9 |
| dLti4,35,10.5: | 232.8 | 1.56 | 28.1 | 34.3 | 44.5 | -10.2 | -2.1 | -8.1 |
| dL $\mathrm{Lt}_{4,38,10.5}$ : | 232.8 | 1.56 | 27.9 | 36.4 | 44.3 | -7.9 | -2.1 | -5.9 |
| dL ${ }_{\text {t4,42,10.5: }}$ | 232.8 | 1.56 | 28.1 | 34.3 | 44.5 | -10.2 | -2.1 | -8.1 |
| dLtit,4,10.5: | 232.8 | 1.56 | 29.4 | 36.0 | 45.8 | -9.8 | -2.1 | -7.7 |
| dL $\mathrm{Lt}_{4,45,10.5}$ : | 232.8 | 1.56 | 26.9 | 35.0 | 43.3 | -8.3 | -2.1 | -6.2 |
| dL ${ }_{\text {t4, 49,10.5: }}$ | 232.8 | 1.56 | 28.4 | 35.7 | 44.8 | -9.1 | -2.1 | -7.0 |
| $\mathrm{dL}_{44,54,10.5}$ : | 232.8 | 1.56 | 27.5 | 33.6 | 43.9 | -10.3 | -2.1 | -8.3 |

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| $\mathrm{dL}_{44,55,10.5}$ : | 232.8 | 1.56 | 28.1 | 35.4 | 44.6 | -9.2 | -2.1 | -7.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLt4,61,10.5: | 232.8 | 1.56 | 28.2 | 36.2 | 44.7 | -8.5 | -2.1 | -6.5 |
| dL ${ }_{\text {t4,68,10.5: }}$ | 232.8 | 1.56 | 29.2 | 36.6 | 45.6 | -9.0 | -2.1 | -7.0 |
| dLta,70,10.5: | 232.8 | 1.56 | 28.9 | 35.7 | 45.4 | -9.7 | -2.1 | -7.6 |
| dL t5,, ,10.5: $^{\text {P }}$ | 309.4 | 1.56 | 27.4 | 33.5 | 44.0 | -10.5 | -2.1 | -8.3 |
| $\mathrm{dL}_{\text {t5,10,10,5: }}$ | 307.8 | 1.56 | 27.9 | 35.8 | 44.4 | -8.6 | -2.1 | -6.5 |
| $\mathrm{dL}_{\text {t5,11,10.5: }}$ | 307.8 | 1.56 | 27.6 | 35.3 | 44.2 | -8.8 | -2.1 | -6.7 |
| $\mathrm{dL}_{\text {t5,12,10.5: }}$ | 307.8 | 1.56 | 26.7 | 35.1 | 43.2 | -8.1 | -2.1 | -6.0 |
| dLt5,14,10.5: | 309.4 | 1.56 | 26.9 | 34.7 | 43.5 | -8.8 | -2.1 | -6.7 |
| dL ${ }_{\text {t5,15,10.5: }}$ | 309.4 | 1.56 | 26.0 | 36.5 | 42.5 | -6.1 | -2.1 | -4.0 |
| $\mathrm{dL}_{\text {t5,16,10.5: }}$ | 309.4 | 1.56 | 25.7 | 35.1 | 42.3 | -7.2 | -2.1 | -5.1 |
| $\mathrm{dL}_{\text {t5,17,10.5: }}$ | 309.4 | 1.56 | 27.0 | 34.4 | 43.6 | -9.1 | -2.1 | -7.0 |
| dL ${ }_{\text {t5,51,10.5: }}$ | 325.0 | 1.56 | 26.5 | 36.7 | 43.1 | -6.4 | -2.1 | -4.2 |
| dLt5,56,10.5: | 325.0 | 1.56 | 25.5 | 31.9 | 42.1 | -10.2 | -2.1 | -8.1 |
| $\mathrm{dL}_{\text {t5,58,10.5: }}$ | 325.0 | 1.56 | 27.1 | 33.8 | 43.7 | -9.9 | -2.1 | -7.8 |
| dL ${ }_{\text {t6,32,10.5: }}$ | 7594.2 | 1.56 | -16.3 | -10.1 | 12.7 | -22.8 | -4.9 | -17.8 |
| dL ${ }_{\text {t6,38,10.5: }}$ | 7906.7 | 1.56 | -17.4 | -11.2 | 11.8 | -23.1 | -5.0 | -18.1 |
| dLt7,38,10.5: | 7906.7 | 1.56 | -17.4 | -11.2 | 11.8 | -23.1 | -5.0 | -18.1 |
| dLt7,41,10.5: | 7917.7 | 1.56 | -17.2 | -11.2 | 12.1 | -23.2 | -5.0 | -18.2 |
| $\mathrm{dL}_{\text {t7,48,10.5: }}$ | 7997.4 | 1.56 | -17.2 | -10.9 | 12.1 | -23.0 | -5.0 | -18.0 |
| dLt7,60,10.5: | 8038.0 | 1.56 | -17.7 | -11.6 | 11.7 | -23.2 | -5.0 | -18.2 |
|  | 8000.5 | 1.56 | -17.0 | -10.8 | 12.3 | -23.1 | -5.0 | -18.1 |

BIN 10.5: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | dL ${ }_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | dL ${ }_{\text {tn, }, \text {, } \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | dLtn,j,k | $\mathrm{f}_{\mathbf{T}}$ | dL ${ }_{\text {tn, }, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -2.3 | 140.6 | -2.4 | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 70.3 | -4.4 | 140.6 | -8.7 | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 75.0 | -1.5 | 140.6 | -6.8 | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 68.8 | -2.1 | --- | --- | 175.0 | -3.7 | --- | --- | --- | --- | --- | --- |
| 5 | 68.8 | -5.9 | 140.6 | -3.1 | --- | --- | 232.8 | -10.2 | --- | --- | --- | --- |
| 6 | 68.8 | -7.3 | --- | --- | 175.0 | -4.7 | 232.8 | -9.7 | --- | --- | --- | --- |
| 7 | 68.8 | -3.6 | --- | --- | 175.0 | -7.8 | 232.8 | -9.1 | --- | --- | --- | --- |
| 8 | 70.3 | -5.5 | 140.6 | -0.3 | --- | --- | 232.8 | -10.0 | --- | --- | --- | --- |
| 9 | 82.8 | -1.2 | --- | --- | 175.0 | -5.6 | 232.8 | -8.9 | 309.4 | -10.5 | --- | --- |
| 10 | 82.8 | -9.0 | --- | --- | 175.0 | -3.3 | --- | --- | 307.8 | -8.6 | --- | --- |
| 11 | 82.8 | -4.6 | 139.1 | -1.3 | --- | --- | --- | --- | 307.8 | -8.8 | -- | --- |
| 12 | 68.8 | -8.2 | 132.8 | -4.4 | --- | --- | --- | --- | 307.8 | -8.1 | --- | --- |
| 13 | --- | --- | 134.4 | -2.7 | --- | --- | 232.8 | -9.3 | --- | --- | --- | --- |
| 14 | 68.8 | -5.5 | 137.5 | -2.8 | --- | --- | --- | --- | 309.4 | -8.8 | - | --- |
| 15 | 68.8 | -6.4 | 137.5 | -7.6 | --- | --- | --- | --- | 309.4 | -6.1 | --- | --- |
| 16 | 68.8 | -3.5 | --- | --- | 175.0 | -2.7 | 232.8 | -9.7 | 309.4 | -7.2 | --- | --- |
| 17 | 68.8 | -3.8 | --- | --- | 175.0 | -9.9 | 232.8 | -8.8 | 309.4 | -9.1 | --- | --- |
| 18 | 70.3 | -2.4 | 140.6 | -2.5 | --- | -- | --- | --- | --- | --- | --- | --- |
| 19 | 70.3 | -3.2 | 140.6 | -2.8 | --- | -- | --- | --- | --- | --- | --- | --- |
| 20 | 70.3 | -8.8 | 140.6 | -4.8 | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 70.3 | -5.2 | 140.6 | -0.8 | --- | --- | 232.8 | -10.2 | --- | --- | --- | -- |
| 22 | 73.4 | -5.5 | 140.6 | -5.4 | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 70.3 | -5.2 | 139.1 | -7.9 | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | 70.3 | -7.6 | 140.6 | -4.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 68.8 | -6.4 | 137.5 | -6.9 | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 68.8 | -3.9 | --- | --- | 175.0 | -5.1 | --- | --- | --- | --- | --- | --- |
| 27 | 68.8 | -3.6 | --- | --- | 175.0 | -2.5 | --- | --- | --- | --- | --- | --- |

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| 28 | 68.8 | -6.3 | 135.9 | -5.2 | --- | --- | 232.8 | -9.2 | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 | 68.8 | -9.8 | 135.9 | -0.8 | --- | --- | 232.8 | -9.4 | --- | --- | --- | --- |
| 30 | 68.8 | -4.8 | 135.9 | -1.3 | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 70.3 | -2.2 | --- | --- | 175.0 | -4.6 | 232.8 | -8.5 | --- | --- | --- | --- |
| 32 | 68.8 | -2.5 | 135.9 | -1.2 | --- | --- | --- | --- | --- | --- | 7594.2 | -22.8 |
| 33 | 68.8 | -2.4 | 139.1 | -0.4 | --- | --- | 232.8 | -10.0 | --- | --- | --- | --- |
| 34 | 68.8 | -1.4 | 137.5 | -1.1 | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 68.8 | -2.2 | --- | --- | 175.0 | -3.1 | 232.8 | -10.2 | --- | --- | --- | --- |
| 36 | 70.3 | -7.6 | 139.1 | -6.1 | --- | --- | --- | --- | --- | --- | --- | --- |
| 37 | 70.3 | -6.3 | 140.6 | -5.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 38 | 68.8 | -7.2 | --- | --- | 175.0 | -3.6 | 232.8 | -7.9 | --- | --- | 7906.7 | -23.1 |
| 39 | 68.8 | -9.0 | --- | --- | 175.0 | -7.5 | --- | --- | --- | --- | --- | --- |
| 40 | --- | --- | 139.1 | -8.7 | --- | --- | --- | --- | --- | --- | --- | --- |
| 41 | --- | --- | 139.1 | -6.1 | --- | --- | --- | --- | --- | --- | -- | --- |
| 42 | 68.8 | -7.9 | --- | --- | 175.0 | -4.9 | 232.8 | -10.2 | --- | --- | --- | --- |
| 43 | 70.3 | -2.7 | 142.2 | -2.0 | --- | --- | 232.8 | -9.8 | --- | --- | --- | --- |
| 44 | 68.8 | -0.1 | --- | --- | 175.0 | -1.1 | --- | --- | --- | -- | --- | --- |
| 45 | 68.8 | 0.1 | --- | --- | 175.0 | -0.4 | 232.8 | -8.3 | --- | --- | --- | --- |
| 46 | 68.8 | -7.9 | --- | --- | 175.0 | -5.3 | --- | --- | --- | --- | --- | --- |
| 47 | 68.8 | -5.0 | --- | --- | 175.0 | -6.3 | --- | --- | --- | --- | --- | --- |
| 48 | 68.8 | -4.2 | --- | --- | 175.0 | -3.1 | --- | --- | --- | --- | --- | --- |
| 49 | 68.8 | -6.4 | 139.1 | -6.6 | --- | --- | 232.8 | -9.1 | --- | --- | --- | --- |
| 50 | 71.9 | -8.2 | -- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 51 | 68.8 | -5.2 | 137.5 | -6.2 | --- | --- | --- | --- | 325.0 | -6.4 | --- | --- |
| 52 | 68.8 | -2.3 | -- | --- | 175.0 | -4.1 | --- | --- | --- | --- | --- | --- |
| 53 | 73.4 | -6.4 | 140.6 | -3.8 | --- | --- | --- | --- | --- | --- | --- | --- |
| 54 | 68.8 | -5.1 | 135.9 | -1.0 | --- | --- | 232.8 | -10.3 | --- | --- | --- | --- |
| 55 | 68.8 | -4.1 | 140.6 | -5.4 | --- | --- | 232.8 | -9.2 | --- | --- | --- | --- |
| 56 | 68.8 | -3.7 | --- | --- | 175.0 | -3.6 | --- | --- | 325.0 | -10.2 | --- | --- |
| 57 | 70.3 | -9.4 | 139.1 | -2.3 | --- | --- | --- | --- | --- | --- | --- | --- |
| 58 | 68.8 | -7.2 | --- | --- | 175.0 | -6.5 | --- | --- | 325.0 | -9.9 | --- | -- |
| 59 | 70.3 | -4.5 | 140.6 | -3.6 | --- | --- | --- | --- | --- | --- | --- | --- |
| 60 | 68.8 | -6.9 | 137.5 | -3.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 61 | 70.3 | -8.2 | --- | --- | 175.0 | -5.8 | 232.8 | -8.5 | --- | --- | --- | --- |
| 62 | 68.8 | -10.0 | 137.5 | -7.2 | --- | --- | --- | --- | --- | --- | --- | --- |
| 63 | --- | --- | 140.6 | -7.4 | -- | --- | --- | --- | --- | --- | --- | --- |
| 64 | 68.8 | -2.2 | 137.5 | -3.8 | --- | --- | --- | --- | --- | --- | --- | -- |
| 65 | 68.8 | 0.2 | 137.5 | -1.9 | --- | --- | --- | --- | -- | --- | --- | --- |
| 66 | 70.3 | -8.0 | --- | --- | 175.0 | -8.7 | --- | --- | --- | --- | --- | --- |
| 67 | 70.3 | -8.6 | 140.6 | -2.9 | --- | --- | --- | --- | --- | --- | --- | --- |
| 68 | 68.8 | -7.7 | 137.5 | -3.6 | --- | --- | 232.8 | -9.0 | --- | --- | --- | --- |
| 69 | 70.3 | -8.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 70 | 70.3 | -4.7 | 140.6 | -6.5 | --- | --- | 232.8 | -9.7 | --- | --- | --- | --- |
| 71 | 70.3 | -4.5 | 142.2 | -4.4 | --- | --- | --- | -- | --- | --- | --- | --- |
| 72 | 70.3 | -5.9 | 142.2 | -6.9 | --- | --- | --- | --- | --- | --- | --- | --- |
| 73 | --- | --- | 139.1 | -6.8 | --- | --- | --- | --- | --- | --- | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL} \mathrm{L}_{\mathrm{k}}[\mathrm{dB}]$ | 70.2 | -4.7 | 139.6 | -5.4 | 175.0 | -8.5 | 232.8 | -12.7 | 310.0 | -13.9 | 7598.5 | -28.0 |
| $\mathrm{La}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |  | -5.0 |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -2.7 |  | -3.3 |  | -6.5 |  | -10.7 |  | -11.8 |  | -23.1 |
| $\mathrm{K}_{\text {TN }}[\mathrm{dB}]$ |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

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BIN 11: Tonal components determined

|  | Frequency | delta f | $\mathrm{L}_{\text {pr,avg, }, \mathrm{k}}$ | $\mathrm{Lppt,j}, \mathrm{k}$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\mathrm{aj}, \mathrm{j}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dLtit,1,11: | 70.3 | 1.56 | 24.2 | 37.6 | 40.5 | -2.8 | -2.0 | -0.8 |
| dL ${ }_{\text {ti, } 2,11}$ : | 71.9 | 1.56 | 23.1 | 39.8 | 39.4 | 0.4 | -2.0 | 2.4 |
| $\mathrm{dL}_{t 1,3,11}$ : | 68.8 | 1.56 | 22.6 | 34.1 | 38.8 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{(1,4,41}$ : | 70.3 | 1.56 | 23.8 | 33.9 | 40.1 | -6.2 | -2.0 | -4.2 |
| $\mathrm{dL}_{\mathrm{t} 1,5,11}$ : | 70.3 | 1.56 | 26.6 | 34.1 | 42.9 | -8.8 | -2.0 | -6.8 |
| $\mathrm{dL}_{\mathrm{t} 1,6,11}$ : | 70.3 | 1.56 | 22.3 | 36.1 | 38.6 | -2.5 | -2.0 | -0.5 |
| dLtit, ${ }_{\text {dil }}$ | 70.3 | 1.56 | 21.4 | 36.1 | 37.7 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 1,8,11}$ | 68.8 | 1.56 | 21.0 | 35.9 | 37.2 | -1.3 | -2.0 | 0.7 |
| $\mathrm{dL}_{\mathrm{t} 1,9,11}$ : | 82.8 | 1.56 | 26.4 | 36.5 | 42.7 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {ti, } 10,11:}$ | 70.3 | 1.56 | 24.8 | 33.5 | 41.1 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\text {t1, } 11,11:}$ | 70.3 | 1.56 | 25.0 | 32.7 | 41.3 | -8.6 | -2.0 | -6.6 |
| $\mathrm{dL}_{\mathrm{t}, 12,11}$ : | 71.9 | 1.56 | 23.9 | 37.0 | 40.2 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {t1,14,11: }}$ | 68.8 | 1.56 | 25.5 | 33.7 | 41.7 | -8.0 | -2.0 | -6.0 |
| dLtil,15,11: | 68.8 | 1.56 | 24.3 | 35.9 | 40.6 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t} 1,16,11}$ : | 70.3 | 1.56 | 24.2 | 35.2 | 40.5 | -5.3 | -2.0 | -3.3 |
| dL $\mathrm{tt}_{1,17,11}$ | 70.3 | 1.56 | 25.7 | 32.2 | 42.0 | -9.8 | -2.0 | -7.8 |
| $\mathrm{dL}_{\text {t1, } 18,11}$ : | 68.8 | 1.56 | 24.1 | 34.4 | 40.4 | -6.0 | -2.0 | -4.0 |
| dLtit,19,11: | 68.8 | 1.56 | 23.5 | 37.0 | 39.7 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{tt}, 20,11$ | 71.9 | 1.56 | 22.5 | 36.1 | 38.8 | -2.7 | -2.0 | -0.7 |
| $\mathrm{dL}_{11,21,11}$ | 68.8 | 1.56 | 24.1 | 31.2 | 40.4 | -9.2 | -2.0 | -7.2 |
| $\mathrm{dL}_{11,22,11}$ : | 70.3 | 1.56 | 26.5 | 37.5 | 42.8 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\text {t1, } 23,11}$ : | 71.9 | 1.56 | 24.6 | 39.1 | 40.9 | -1.8 | -2.0 | 0.2 |
| dL $\mathrm{tt}, 24,11$ | 70.3 | 1.56 | 21.7 | 38.2 | 38.0 | 0.2 | -2.0 | 2.2 |
| $\mathrm{dL}_{\text {t1, } 25,11}$ : | 71.9 | 1.56 | 25.7 | 39.4 | 42.0 | -2.6 | -2.0 | -0.6 |
| $\mathrm{dL}_{\text {t1, } 26,11}$ : | 71.9 | 1.56 | 25.9 | 36.4 | 42.2 | -5.8 | -2.0 | -3.8 |
| dLtit,27,11: | 71.9 | 1.56 | 25.3 | 38.2 | 41.6 | -3.4 | -2.0 | -1.4 |
| $\mathrm{dL}_{\text {t1, } 28,11}$ : | 68.8 | 1.56 | 23.8 | 31.4 | 40.0 | -8.6 | -2.0 | -6.6 |
| dLtil, 29,11: | 68.8 | 1.56 | 24.2 | 35.5 | 40.4 | -4.9 | -2.0 | -2.9 |
| $\mathrm{dL}_{\text {t1, } 30,11}$ : | 71.9 | 1.56 | 24.5 | 38.4 | 40.8 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{t}_{1,31,11:}$ | 68.8 | 1.56 | 23.1 | 35.8 | 39.3 | -3.5 | -2.0 | -1.5 |
| dLtil32,11: | 71.9 | 1.56 | 25.8 | 36.6 | 42.1 | -5.6 | -2.0 | -3.6 |
| $\mathrm{dL}_{11,35,11}$ | 70.3 | 1.56 | 23.3 | 31.9 | 39.6 | -7.7 | -2.0 | -5.7 |
| $\mathrm{dL}_{\text {t1, } 36,11}$ : | 70.3 | 1.56 | 23.6 | 34.3 | 39.9 | -5.6 | -2.0 | -3.6 |
| $\mathrm{dL}_{\underline{11,37,11}}$ | 68.8 | 1.56 | 23.5 | 35.9 | 39.8 | -3.9 | -2.0 | -1.9 |
| dLtil,38,11: | 70.3 | 1.56 | 22.5 | 36.2 | 38.8 | -2.6 | -2.0 | -0.6 |
| dLtil,39,11: | 68.8 | 1.56 | 23.4 | 33.3 | 39.6 | -6.3 | -2.0 | -4.3 |
| $\mathrm{dL}_{\text {t1, } 40,11}$ : | 68.8 | 1.56 | 23.9 | 34.7 | 40.2 | -5.4 | -2.0 | -3.4 |
| dL $\mathrm{tt}, 41,11$ | 70.3 | 1.56 | 24.0 | 33.8 | 40.3 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\text {t1,42,11: }}$ | 71.9 | 1.56 | 23.7 | 34.3 | 40.0 | -5.6 | -2.0 | -3.6 |
| dL $\mathrm{tt}, 43,11$ | 68.8 | 1.56 | 24.9 | 35.9 | 41.1 | -5.2 | -2.0 | -3.2 |
| $\mathrm{dL}_{\text {t1,44,11: }}$ | 68.8 | 1.56 | 24.2 | 33.9 | 40.5 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\text {t1, 45,11: }}$ | 71.9 | 1.56 | 24.1 | 37.1 | 40.4 | -3.3 | -2.0 | -1.3 |
| dL $\mathrm{t}_{1,46,11}$ | 68.8 | 1.56 | 25.4 | 37.2 | 41.6 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{11,47,11}$ : | 70.3 | 1.56 | 25.5 | 32.4 | 41.8 | -9.4 | -2.0 | -7.4 |
| $\mathrm{dL}_{\text {t1, 48,41: }}$ | 71.9 | 1.56 | 27.1 | 37.5 | 43.4 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\text {t1, 49, } 11}$ : | 71.9 | 1.56 | 24.4 | 38.0 | 40.7 | -2.7 | -2.0 | -0.7 |
| dL $\mathrm{tt}, 50,11$ | 68.8 | 1.56 | 23.2 | 36.0 | 39.4 | -3.4 | -2.0 | -1.4 |
| dL $\mathrm{t}_{1,51,11:}$ | 68.8 | 1.56 | 25.6 | 35.7 | 41.8 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {t1, } 52,11}$ : | 75.0 | 1.56 | 24.1 | 38.0 | 40.4 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{ta} 1,53,11:^{\text {a }}$ | 68.8 | 1.56 | 22.6 | 38.8 | 38.8 | 0.0 | -2.0 | 2.0 |
| $\mathrm{dL}_{\mathrm{t} 1,54,11}$ : | 70.3 | 1.56 | 25.5 | 34.9 | 41.8 | -6.8 | -2.0 | -4.8 |

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| $\mathrm{dL}_{\text {t1, } 56,11}$ : | 70.3 | 1.56 | 23.7 | 35.2 | 40.0 | -4.9 | -2.0 | -2.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t1, } 57,11:}$ | 68.8 | 1.56 | 22.4 | 34.6 | 38.6 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\text {t1, } 58,11}$ : | 68.8 | 1.56 | 24.0 | 33.2 | 40.3 | -7.1 | -2.0 | -5.1 |
| dLti,59,11: | 73.4 | 1.56 | 24.6 | 37.6 | 40.9 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\text {t1,60,11 }}$ | 68.8 | 1.56 | 23.1 | 37.2 | 39.3 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\text {t1,61,11: }}$ | 68.8 | 1.56 | 23.8 | 33.8 | 40.0 | -6.2 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {t1,62,11: }}$ | 68.8 | 1.56 | 24.7 | 35.3 | 41.0 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\text {t1,64,11: }}$ | 68.8 | 1.56 | 21.8 | 36.9 | 38.1 | -1.2 | -2.0 | 0.8 |
| dL ${ }_{\text {t1,65,11: }}$ | 68.8 | 1.56 | 22.7 | 35.5 | 39.0 | -3.4 | -2.0 | -1.4 |
| $\mathrm{dL}_{\text {t1,66,11: }}$ | 70.3 | 1.56 | 24.4 | 32.5 | 40.7 | -8.2 | -2.0 | -6.2 |
| $\mathrm{dL}_{\text {t1,67,11 }}$ : | 71.9 | 1.56 | 22.4 | 35.8 | 38.7 | -2.9 | -2.0 | -0.9 |
| $\mathrm{dL}_{\text {t1,68,11 }}$ : | 70.3 | 1.56 | 20.8 | 37.1 | 37.1 | 0.0 | -2.0 | 2.0 |
| $\mathrm{dL}_{\text {11,69,11: }}$ | 68.8 | 1.56 | 23.2 | 36.8 | 39.4 | -2.6 | -2.0 | -0.6 |
| dL $\mathrm{ta,70,11}$ | 71.9 | 1.56 | 24.7 | 35.7 | 41.0 | -5.3 | -2.0 | -3.3 |
| dL $\mathrm{Lt}_{1,73,11}$ : | 71.9 | 1.56 | 25.9 | 32.0 | 42.2 | -10.2 | -2.0 | -8.2 |
| $\mathrm{dL}_{11,74,11}$ : | 71.9 | 1.56 | 23.9 | 35.8 | 40.2 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{11,75,11}$ | 68.8 | 1.56 | 25.4 | 33.7 | 41.6 | -7.9 | -2.0 | -5.9 |
| dL $\mathrm{t}_{\mathrm{t}, 76,11}$ : | 68.8 | 1.56 | 24.0 | 35.8 | 40.2 | -4.4 | -2.0 | -2.4 |
| dLtil ${ }_{\text {d7,11: }}$ | 68.8 | 1.56 | 23.2 | 35.3 | 39.4 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t1,78,11: }}$ | 73.4 | 1.56 | 22.3 | 33.7 | 38.6 | -4.9 | -2.0 | -2.9 |
| dL $\mathrm{ta}_{1,79,11}$ | 71.9 | 1.56 | 25.3 | 34.5 | 41.6 | -7.1 | -2.0 | -5.1 |
| $\mathrm{dL}_{\text {t1,80,11: }}$ | 71.9 | 1.56 | 24.5 | 38.0 | 40.8 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{t}_{\mathrm{t}, 81,11}$ : | 71.9 | 1.56 | 24.8 | 31.7 | 41.1 | -9.4 | -2.0 | -7.4 |
| $\mathrm{dL}_{11,82,11}$ | 68.8 | 1.56 | 25.7 | 31.9 | 42.0 | -10.1 | -2.0 | -8.1 |
| $\mathrm{dL}_{11,83,11}$ : | 70.3 | 1.56 | 24.6 | 32.7 | 40.9 | -8.2 | -2.0 | -6.2 |
| dLL1,84,11: | 71.9 | 1.56 | 23.8 | 37.4 | 40.1 | -2.7 | -2.0 | -0.7 |
| dLti, 85,11 : | 71.9 | 1.56 | 23.3 | 35.7 | 39.6 | -3.9 | -2.0 | -1.9 |
| dL $\mathrm{ta} 1,86,11$ | 71.9 | 1.56 | 22.2 | 36.0 | 38.5 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{11,87,11}$ : | 68.8 | 1.56 | 22.2 | 37.9 | 38.5 | -0.6 | -2.0 | 1.4 |
| dLL ${ }_{\mathrm{t}, 88,11}$ : | 70.3 | 1.56 | 22.7 | 34.4 | 39.0 | -4.7 | -2.0 | -2.6 |
| dL $\mathrm{t} 1,89,11$ | 68.8 | 1.56 | 24.8 | 34.3 | 41.1 | -6.8 | -2.0 | -4.8 |
| dL ${ }_{\text {t1,90,11: }}$ | 76.6 | 1.56 | 24.9 | 32.9 | 41.2 | -8.4 | -2.0 | -6.4 |
| $\mathrm{dL}_{\text {t1,91,11 }}$ : | 70.3 | 1.56 | 26.1 | 34.3 | 42.4 | -8.1 | -2.0 | -6.1 |
| $\mathrm{dL}_{11,92,11}$ : | 75.0 | 1.56 | 26.1 | 37.8 | 42.4 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{11,93,11}$ : | 68.8 | 1.56 | 24.6 | 34.7 | 40.9 | -6.1 | -2.0 | -4.1 |
| dL $\mathrm{t} 1,94,11$ | 70.3 | 1.56 | 24.3 | 32.7 | 40.6 | -7.9 | -2.0 | -5.9 |
| $\mathrm{dL}_{11,95,11}$ : | 70.3 | 1.56 | 25.0 | 33.8 | 41.3 | -7.5 | -2.0 | -5.5 |
| dL ${ }_{\text {t1,97,11: }}$ | 70.3 | 1.56 | 24.7 | 33.7 | 41.0 | -7.3 | -2.0 | -5.3 |
| dL ${ }_{11,98,11}$ | 70.3 | 1.56 | 26.5 | 33.7 | 42.8 | -9.1 | -2.0 | -7.1 |
| $\mathrm{dL}_{11,99,11}$ : | 71.9 | 1.56 | 27.1 | 35.5 | 43.4 | -7.9 | -2.0 | -5.9 |
| $\mathrm{dL}_{11,100,11}$ : | 68.8 | 1.56 | 24.7 | 36.0 | 40.9 | -4.9 | -2.0 | -2.9 |
| $\mathrm{dL}_{\text {(1, 101, }}$ : | 68.8 | 1.56 | 24.7 | 35.8 | 40.9 | -5.1 | -2.0 | -3.1 |
| dL ${ }_{11,102,11}$ : | 70.3 | 1.56 | 25.0 | 35.9 | 41.3 | -5.4 | -2.0 | -3.4 |
| dL ${ }_{\text {t1, } 103,11}$ : | 70.3 | 1.56 | 24.8 | 33.6 | 41.1 | -7.5 | -2.0 | -5.5 |
| $\mathrm{dL}_{\text {t1, 104, }}$ : | 68.8 | 1.56 | 25.7 | 34.8 | 41.9 | -7.1 | -2.0 | -5.1 |
| $\mathrm{dL}_{\text {ti, 105,11: }}$ | 70.3 | 1.56 | 26.2 | 33.2 | 42.5 | -9.3 | -2.0 | -7.3 |
| $\mathrm{dL}_{\text {t1, } 106,11}$ : | 70.3 | 1.56 | 25.0 | 36.1 | 41.3 | -5.1 | -2.0 | -3.1 |
| dL $\mathrm{t}_{2,9,11}$ : | 82.8 | 1.56 | 26.4 | 36.5 | 42.7 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {t2,33,11: }}$ | 98.4 | 1.56 | 25.0 | 41.0 | 41.3 | -0.3 | -2.0 | 1.7 |
| dL $\mathrm{t}_{2,34,11}$ | 89.1 | 1.56 | 27.6 | 34.4 | 43.9 | -9.5 | -2.0 | -7.5 |
| dL ${ }_{\text {t2,71,11: }}$ | 106.3 | 1.56 | 27.6 | 43.0 | 43.9 | -0.9 | -2.0 | 1.1 |
| dL ${ }_{\text {t2,72,11: }}$ | 93.8 | 1.56 | 25.8 | 46.3 | 42.2 | 4.1 | -2.0 | 6.1 |
| dL ${ }_{\text {t } 3,1,11}$ : | 142.2 | 1.56 | 28.0 | 43.0 | 44.3 | -1.3 | -2.0 | 0.7 |
| dL ${ }_{\text {t3,5,11 }}$ | 142.2 | 1.56 | 29.5 | 38.3 | 45.8 | -7.5 | -2.0 | -5.5 |

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| $\mathrm{dL}_{\mathrm{t}, 6,11}$ : | 140.6 | 1.56 | 26.1 | 40.5 | 42.4 | -1.9 | -2.0 | 0.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLti3,7,11: | 140.6 | 1.56 | 25.9 | 40.8 | 42.2 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\mathrm{t}_{3,9,11} \text { : }}$ | 139.1 | 1.56 | 28.3 | 37.1 | 44.6 | -7.5 | -2.0 | -5.5 |
| dL ${ }_{\text {t }}^{1,11,11}$ : | 139.1 | 1.56 | 28.0 | 42.4 | 44.3 | -1.9 | -2.0 | 0.1 |
| $\mathrm{dL}_{\mathrm{t}, 12,11}$ : | 142.2 | 1.56 | 26.5 | 41.2 | 42.8 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\mathrm{t} 3,13,11}$ : | 139.1 | 1.56 | 28.1 | 39.0 | 44.4 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t} 3,14,11}$ : | 139.1 | 1.56 | 27.5 | 36.6 | 43.8 | -7.2 | -2.0 | -5.2 |
| $\mathrm{dL}_{\mathrm{t}, 15,11}$ : | 139.1 | 1.56 | 27.3 | 40.5 | 43.6 | -3.2 | -2.0 | -1.2 |
| dLit ${ }^{\text {d } 17,11 \text { : }}$ | 139.1 | 1.56 | 28.3 | 37.0 | 44.6 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\mathrm{t} 3,19,11}$ : | 139.1 | 1.56 | 26.7 | 36.4 | 43.0 | -6.6 | -2.0 | -4.6 |
| dL $\mathrm{L}_{\mathbf{1}, 22,11}$ : | 140.6 | 1.56 | 29.7 | 42.8 | 46.0 | -3.2 | -2.0 | -1.2 |
| dL $\mathrm{L}_{\mathbf{t}, 23,11}$ : | 142.2 | 1.56 | 28.0 | 45.7 | 44.3 | 1.4 | -2.0 | 3.4 |
| dL ${ }_{\text {ti,24,11: }}$ | 142.2 | 1.56 | 28.0 | 40.7 | 44.3 | -3.7 | -2.0 | -1.6 |
| dLit $3,25,11$ : | 142.2 | 1.56 | 28.5 | 40.3 | 44.8 | -4.5 | -2.0 | -2.5 |
| dL $\mathrm{L}_{\mathrm{t}, 28,11}$ : | 139.1 | 1.56 | 26.8 | 44.0 | 43.1 | 0.9 | -2.0 | 2.9 |
| dL $\mathrm{L}_{\mathbf{t}, 29,11}$ : | 137.5 | 1.56 | 27.5 | 38.0 | 43.8 | -5.8 | -2.0 | -3.8 |
| dL ${ }_{\text {t } 3,30,11}$ : | 143.8 | 1.56 | 27.2 | 35.1 | 43.5 | -8.5 | -2.0 | -6.4 |
| dL ${ }_{\text {t3,31,11: }}$ | 139.1 | 1.56 | 27.1 | 41.0 | 43.4 | -2.4 | -2.0 | -0.4 |
| dL $\mathrm{t}_{3,32,11}$ : | 140.6 | 1.56 | 29.3 | 38.8 | 45.6 | -6.8 | -2.0 | -4.7 |
| dL ${ }_{\text {ti,36,11: }}$ | 140.6 | 1.56 | 26.9 | 39.5 | 43.2 | -3.6 | -2.0 | -1.6 |
| dL $\mathrm{L}_{13,47,11 \text { : }}$ | 140.6 | 1.56 | 28.6 | 41.7 | 44.9 | -3.2 | -2.0 | -1.2 |
| dL ${ }_{\text {t } 3,48,11}$ : | 142.2 | 1.56 | 30.1 | 39.3 | 46.4 | -7.1 | -2.0 | -5.0 |
| dL $\mathrm{L}_{\text {t, 49, } 11}$ : | 146.9 | 1.56 | 27.4 | 34.5 | 43.7 | -9.2 | -2.0 | -7.2 |
| dL $\mathrm{L}_{13,51,11}$ : | 139.1 | 1.56 | 28.4 | 41.9 | 44.7 | -2.8 | -2.0 | -0.7 |
| dL ${ }_{\text {t3, }, 54,11}$ : | 140.6 | 1.56 | 29.5 | 43.6 | 45.8 | -2.2 | -2.0 | -0.2 |
| dL $\mathrm{L}_{3,55,111}$ | 139.1 | 1.56 | 28.5 | 43.4 | 44.8 | -1.4 | -2.0 | 0.6 |
| dL ${ }_{\text {t }}^{3,56,11}$ : | 142.2 | 1.56 | 26.9 | 40.3 | 43.2 | -2.9 | -2.0 | -0.9 |
| dL ${ }_{\text {ti, }, 5,11}$ : | 143.8 | 1.56 | 28.5 | 41.9 | 44.8 | -3.0 | -2.0 | -0.9 |
| dL $\mathrm{L}_{13,67,11}$ : | 142.2 | 1.56 | 27.5 | 45.2 | 43.8 | 1.4 | -2.0 | 3.5 |
| dL ${ }_{\text {t } 3,68,11}$ : | 140.6 | 1.56 | 26.7 | 42.4 | 43.0 | -0.6 | -2.0 | 1.4 |
| dL ${ }_{\text {t }}^{3,72,11:}$ | 142.2 | 1.56 | 28.0 | 41.9 | 44.3 | -2.5 | -2.0 | -0.4 |
| dL $\mathrm{L}_{13,73,11:}$ | 139.1 | 1.56 | 28.3 | 38.5 | 44.6 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\mathrm{t} 3,77,11}$ : | 139.1 | 1.56 | 26.8 | 37.9 | 43.1 | -5.2 | -2.0 | -3.2 |
| dL ${ }_{\text {t, }, 83,11}$ : | 139.1 | 1.56 | 28.2 | 43.8 | 44.5 | -0.7 | -2.0 | 1.3 |
| dL $\mathrm{L}_{\mathrm{t}, 85,11}$ : | 142.2 | 1.56 | 27.8 | 43.9 | 44.1 | -0.2 | -2.0 | 1.8 |
| dL $\mathrm{L}_{13,86,11}$ : | 142.2 | 1.56 | 27.0 | 45.0 | 43.3 | 1.6 | -2.0 | 3.7 |
| dL $\mathrm{L}_{13,87,11}$ : | 139.1 | 1.56 | 26.9 | 42.2 | 43.2 | -1.0 | -2.0 | 1.0 |
| dL $\mathrm{L}_{13,89,11 \text { : }}$ | 139.1 | 1.56 | 28.2 | 40.1 | 44.5 | -4.4 | -2.0 | -2.3 |
| dL $\mathrm{L}_{13,90,11}$ : | 140.6 | 1.56 | 28.0 | 42.1 | 44.3 | -2.2 | -2.0 | -0.2 |
| dL ${ }_{\text {ta, }}^{11,11}$ : | 140.6 | 1.56 | 29.8 | 39.7 | 46.1 | -6.4 | -2.0 | -4.3 |
| dL $\mathrm{L}_{13,93,11}$ : | 139.1 | 1.56 | 27.9 | 39.8 | 44.2 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{\mathrm{t}, 9,9,11}$ : | 140.6 | 1.56 | 28.0 | 41.9 | 44.3 | -2.4 | -2.0 | -0.4 |
| dL ${ }_{\text {t }}$, 95,11 : | 139.1 | 1.56 | 28.6 | 41.2 | 44.9 | -3.7 | -2.0 | -1.7 |
| dL $\mathrm{L}_{13,98,11}$ : | 140.6 | 1.56 | 29.5 | 38.3 | 45.8 | -7.6 | -2.0 | -5.5 |
| dL $\mathrm{L}_{\mathrm{t}, 99,11}$ : | 142.2 | 1.56 | 30.0 | 38.1 | 46.3 | -8.2 | -2.0 | -6.2 |
| dL ${ }_{\text {t3,101,11 }}$ | 139.1 | 1.56 | 28.1 | 40.9 | 44.4 | -3.6 | -2.0 | -1.6 |
| dL ${ }_{\text {t3,102,11: }}$ | 140.6 | 1.56 | 28.4 | 40.5 | 44.7 | -4.2 | -2.0 | -2.2 |
| dL $\mathrm{L}_{3,103,11}$ | 140.6 | 1.56 | 27.9 | 38.2 | 44.2 | -6.0 | -2.0 | -4.0 |
| dL ${ }_{\text {t3,104,11 }}$ : | 139.1 | 1.56 | 28.6 | 40.1 | 44.9 | -4.8 | -2.0 | -2.7 |
| dL ${ }_{\text {ti,106,11: }}$ | 140.6 | 1.56 | 29.1 | 41.0 | 45.4 | -4.3 | -2.0 | -2.3 |
| dLti4, 2,11 : | 175.0 | 1.56 | 28.1 | 35.8 | 44.4 | -8.7 | -2.0 | -6.6 |
| $\mathrm{dL}_{\text {t4,3,11: }}$ | 175.0 | 1.56 | 27.1 | 40.5 | 43.4 | -2.8 | -2.0 | -0.8 |
| dLti4,4,11: | 175.0 | 1.56 | 26.8 | 39.3 | 43.1 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{44,8,11}$ : | 175.0 | 1.56 | 26.5 | 41.4 | 42.8 | -1.4 | -2.0 | 0.6 |

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| $\mathrm{dL}_{44,10,11}$ : | 175.0 | 1.56 | 27.5 | 35.7 | 43.8 | -8.1 | -2.0 | -6.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLt ${ }_{\text {t, } 16,11}$ : | 175.0 | 1.56 | 27.7 | 39.1 | 44.0 | -4.9 | -2.0 | -2.9 |
| $\mathrm{dL}_{\text {t4, 18,11: }}$ | 175.0 | 1.56 | 27.5 | 42.0 | 43.8 | -1.8 | -2.0 | 0.2 |
| dLteta0,11: | 175.0 | 1.56 | 26.2 | 36.1 | 42.5 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\text {t4, 21,11: }}$ | 175.0 | 1.56 | 27.9 | 39.9 | 44.2 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\text {t4, 26,11: }}$ | 175.0 | 1.56 | 28.1 | 40.1 | 44.4 | -4.3 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t4, 27,11: }}$ | 175.0 | 1.56 | 28.3 | 39.7 | 44.6 | -4.8 | -2.0 | -2.8 |
| $\mathrm{dL}_{\text {t4, 33,11: }}$ | 175.0 | 1.56 | 26.4 | 38.9 | 42.7 | -3.7 | -2.0 | -1.7 |
|  | 175.0 | 1.56 | 28.3 | 37.1 | 44.6 | -7.5 | -2.0 | -5.4 |
| $\mathrm{dL}_{\text {t4, 35,11: }}$ | 175.0 | 1.56 | 26.8 | 41.7 | 43.1 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t4, 37,11: }}$ | 175.0 | 1.56 | 27.8 | 42.6 | 44.1 | -1.4 | -2.0 | 0.6 |
| $\mathrm{dL}_{\text {t4, 38,11: }}$ | 175.0 | 1.56 | 27.1 | 39.9 | 43.4 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {t4,39,11: }}$ | 175.0 | 1.56 | 28.0 | 41.0 | 44.3 | -3.3 | -2.0 | -1.3 |
| dLtit,40,11: | 175.0 | 1.56 | 29.1 | 42.0 | 45.4 | -3.4 | -2.0 | -1.3 |
| $\mathrm{dL}_{\text {t4,41,11: }}$ | 175.0 | 1.56 | 28.2 | 40.4 | 44.5 | -4.1 | -2.0 | -2.1 |
| $\mathrm{dL}_{\text {t4,42,11: }}$ | 175.0 | 1.56 | 27.8 | 38.5 | 44.1 | -5.6 | -2.0 | -3.5 |
| $\mathrm{dL}_{\text {t4,43,11: }}$ | 175.0 | 1.56 | 27.9 | 39.7 | 44.2 | -4.5 | -2.0 | -2.5 |
| $\mathrm{dL}_{\text {t4,44,11: }}$ | 175.0 | 1.56 | 27.1 | 35.8 | 43.4 | -7.7 | -2.0 | -5.6 |
| dLtetas,11: | 175.0 | 1.56 | 28.4 | 38.6 | 44.7 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{\text {t4,46,11: }}$ | 175.0 | 1.56 | 27.8 | 35.8 | 44.1 | -8.3 | -2.0 | -6.3 |
| dL ${ }_{\text {t4, 50,11: }}$ | 175.0 | 1.56 | 27.3 | 40.3 | 43.6 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\text {t4, 52,11: }}$ | 175.0 | 1.56 | 27.9 | 37.5 | 44.2 | -6.7 | -2.0 | -4.7 |
| $\mathrm{dL}_{\text {t4, 53,11: }}$ | 175.0 | 1.56 | 27.4 | 40.6 | 43.7 | -3.2 | -2.0 | -1.1 |
| $\mathrm{dL}_{\text {t4, 57,11: }}$ | 175.0 | 1.56 | 26.3 | 40.5 | 42.6 | -2.1 | -2.0 | -0.1 |
| $\mathrm{dL}_{\text {t4, 58,11: }}$ | 175.0 | 1.56 | 27.6 | 39.3 | 43.9 | -4.6 | -2.0 | -2.5 |
| dL t4,60,11: | 175.0 | 1.56 | 27.2 | 40.9 | 43.5 | -2.6 | -2.0 | -0.6 |
| dLti4,61,11: | 175.0 | 1.56 | 27.2 | 38.5 | 43.5 | -5.0 | -2.0 | -2.9 |
| dL $\mathrm{Lt}_{4,62,11}$ : | 175.0 | 1.56 | 28.4 | 39.8 | 44.7 | -4.9 | -2.0 | -2.9 |
| $\mathrm{dL}_{\text {t4,63,11: }}$ | 175.0 | 1.56 | 29.4 | 39.3 | 45.7 | -6.5 | -2.0 | -4.4 |
| dL ${ }_{\text {t4, } 64,11}$ : | 175.0 | 1.56 | 28.0 | 40.6 | 44.3 | -3.7 | -2.0 | -1.6 |
| dLtat,65,11: | 175.0 | 1.56 | 27.6 | 38.9 | 43.9 | -5.0 | -2.0 | -3.0 |
| dLti4,66,11: | 175.0 | 1.56 | 27.4 | 38.3 | 43.7 | -5.5 | -2.0 | -3.4 |
| $\mathrm{dL}_{44,69,11}$ : | 175.0 | 1.56 | 28.0 | 42.6 | 44.3 | -1.7 | -2.0 | 0.3 |
| $\mathrm{dL}_{\text {t4, } 70,11}$ : | 175.0 | 1.56 | 27.8 | 38.1 | 44.1 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\text {t4, 71,11: }}$ | 175.0 | 1.56 | 27.5 | 39.6 | 43.8 | -4.2 | -2.0 | -2.2 |
| dLti4,74,11: | 175.0 | 1.56 | 27.8 | 40.2 | 44.1 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\text {t4,75,11: }}$ | 175.0 | 1.56 | 28.1 | 41.0 | 44.4 | -3.4 | -2.0 | -1.4 |
| dL ${ }_{\text {t4,76,11: }}$ | 175.0 | 1.56 | 28.1 | 41.5 | 44.4 | -3.0 | -2.0 | -0.9 |
| dL $\mathrm{ta}_{4,78,11:}$ | 175.0 | 1.56 | 27.0 | 40.0 | 43.3 | -3.3 | -2.0 | -1.2 |
| $\mathrm{dL}_{44,79,11}$ : | 175.0 | 1.56 | 28.3 | 39.9 | 44.6 | -4.7 | -2.0 | -2.7 |
| dL $\mathrm{Lt}_{4,80,11}$ : | 175.0 | 1.56 | 27.6 | 34.2 | 43.9 | -9.7 | -2.0 | -7.7 |
| $\mathrm{dL}_{44,81,11}$ : | 175.0 | 1.56 | 27.6 | 35.7 | 43.9 | -8.2 | -2.0 | -6.2 |
| dLtitere,11: | 175.0 | 1.56 | 29.0 | 36.9 | 45.3 | -8.4 | -2.0 | -6.3 |
| dLtite8,11: | 175.0 | 1.56 | 27.5 | 41.7 | 43.8 | -2.1 | -2.0 | 0.0 |
| dL $\mathrm{ta,88,11}$ | 175.0 | 1.56 | 27.9 | 39.2 | 44.2 | -5.0 | -2.0 | -3.0 |
| $\mathrm{dL}_{\text {t4,92,11: }}$ | 175.0 | 1.56 | 28.9 | 36.8 | 45.2 | -8.4 | -2.0 | -6.4 |
| $\mathrm{dL}_{\text {t4,96,11: }}$ | 175.0 | 1.56 | 30.8 | 40.4 | 47.1 | -6.8 | -2.0 | -4.7 |
| dL ${ }_{\text {t4, } 97,11:}$ | 175.0 | 1.56 | 29.1 | 38.6 | 45.4 | -6.8 | -2.0 | -4.7 |
| $\mathrm{dL}_{44,100,11}$ : | 175.0 | 1.56 | 28.7 | 37.7 | 45.0 | -7.3 | -2.0 | -5.3 |
| $\mathrm{dL}_{\text {t5, 3,11: }}$ | 232.8 | 1.56 | 26.9 | 35.2 | 43.3 | -8.1 | -2.1 | -6.1 |
| dLt5,4,11: | 232.8 | 1.56 | 26.4 | 34.3 | 42.8 | -8.5 | -2.1 | -6.5 |
| dL ${ }_{\text {t5,6,11: }}$ | 232.8 | 1.56 | 26.2 | 32.3 | 42.6 | -10.4 | -2.1 | -8.3 |
| dLt5,7,11: | 232.8 | 1.56 | 26.0 | 32.2 | 42.5 | -10.2 | -2.1 | -8.2 |
| dL ${ }_{\text {t5, }, 8,11}$ : | 232.8 | 1.56 | 27.0 | 35.2 | 43.5 | -8.3 | -2.1 | -6.2 |

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| $\mathrm{dL}_{\text {t5, } 10,11}$ : | 232.8 | 1.56 | 26.7 | 33.5 | 43.1 | -9.6 | -2.1 | -7.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLt5,11,11: | 232.8 | 1.56 | 27.1 | 33.7 | 43.5 | -9.8 | -2.1 | -7.7 |
| $\mathrm{dL}_{\text {t5,16,11: }}$ | 232.8 | 1.56 | 26.8 | 35.6 | 43.2 | -7.6 | -2.1 | -5.5 |
| dL t5, 23,11: | 232.8 | 1.56 | 27.9 | 34.1 | 44.4 | -10.3 | -2.1 | -8.2 |
| $\mathrm{dL}_{\text {t5,24,11: }}$ | 232.8 | 1.56 | 29.3 | 36.6 | 45.7 | -9.2 | -2.1 | -7.1 |
| $\mathrm{dL}_{\text {t5,26,11: }}$ | 232.8 | 1.56 | 27.5 | 35.3 | 43.9 | -8.6 | -2.1 | -6.5 |
| $\mathrm{dL}_{\text {t5, 27,11: }}$ | 232.8 | 1.56 | 27.9 | 33.9 | 44.3 | -10.4 | -2.1 | -8.3 |
| $\mathrm{dL}_{\text {t5,28,11: }}$ | 232.8 | 1.56 | 26.1 | 32.1 | 42.6 | -10.4 | -2.1 | -8.4 |
| dLt5,29,11: | 232.8 | 1.56 | 26.8 | 34.2 | 43.3 | -9.1 | -2.1 | -7.0 |
| $\mathrm{dL}_{\text {t5,31,11: }}$ | 232.8 | 1.56 | 26.4 | 33.6 | 42.9 | -9.3 | -2.1 | -7.2 |
| $\mathrm{dL}_{\text {t5,35,11: }}$ | 232.8 | 1.56 | 26.6 | 33.0 | 43.1 | -10.1 | -2.1 | -8.0 |
| dL ${ }_{\text {t5,37,11: }}$ | 232.8 | 1.56 | 27.5 | 35.9 | 43.9 | -8.0 | -2.1 | -6.0 |
| $\mathrm{dL}_{\text {t5,41,11: }}$ | 232.8 | 1.56 | 27.5 | 34.2 | 44.0 | -9.8 | -2.1 | -7.8 |
| dL t5,42,11: | 232.8 | 1.56 | 27.2 | 33.3 | 43.7 | -10.4 | -2.1 | -8.3 |
| $\mathrm{dL}_{\text {t5,43,11: }}$ | 232.8 | 1.56 | 27.2 | 34.8 | 43.6 | -8.8 | -2.1 | -6.8 |
| $\mathrm{dL}_{\text {t5,45,11: }}$ | 232.8 | 1.56 | 27.5 | 34.1 | 43.9 | -9.9 | -2.1 | -7.8 |
| dL ${ }_{\text {t5,49,11: }}$ | 232.8 | 1.56 | 27.2 | 33.7 | 43.7 | -10.0 | -2.1 | -7.9 |
| $\mathrm{dL}_{\text {t5,52,11: }}$ | 232.8 | 1.56 | 27.6 | 35.2 | 44.0 | -8.8 | -2.1 | -6.7 |
| dL ${ }_{\text {t5,54,11: }}$ | 232.8 | 1.56 | 29.7 | 36.9 | 46.2 | -9.2 | -2.1 | -7.2 |
| $\mathrm{dL}_{\text {t5,55,11: }}$ | 232.8 | 1.56 | 28.4 | 34.5 | 44.8 | -10.3 | -2.1 | -8.3 |
| dLt5,56,11: | 232.8 | 1.56 | 26.9 | 35.4 | 43.4 | -7.9 | -2.1 | -5.9 |
| dL ${ }_{\text {t5,57,11: }}$ | 232.8 | 1.56 | 26.5 | 34.3 | 42.9 | -8.6 | -2.1 | -6.5 |
| dL ${ }_{\text {t5,58,11: }}$ | 232.8 | 1.56 | 27.8 | 34.3 | 44.3 | -10.0 | -2.1 | -7.9 |
| dL ${ }_{\text {t5,59,11: }}$ | 232.8 | 1.56 | 28.8 | 36.0 | 45.2 | -9.2 | -2.1 | -7.2 |
| dL ${ }_{\text {t5,63,11: }}$ | 232.8 | 1.56 | 28.4 | 37.5 | 44.8 | -7.3 | -2.1 | -5.3 |
| dLt5,64,11: | 232.8 | 1.56 | 27.7 | 35.1 | 44.2 | -9.1 | -2.1 | -7.0 |
| dL t5,65,11: | 232.8 | 1.56 | 27.0 | 33.5 | 43.4 | -9.9 | -2.1 | -7.8 |
| $\mathrm{dL}_{\text {t5,67,11: }}$ | 232.8 | 1.56 | 27.9 | 35.4 | 44.3 | -8.9 | -2.1 | -6.9 |
| dL ${ }_{\text {t5,68,11 }}$ : | 232.8 | 1.56 | 27.2 | 35.0 | 43.7 | -8.7 | -2.1 | -6.7 |
| dL ${ }_{\text {t5,70,11 }}$ : | 232.8 | 1.56 | 27.6 | 34.0 | 44.0 | -10.0 | -2.1 | -7.9 |
| dL t5,71,11: | 232.8 | 1.56 | 27.9 | 35.5 | 44.3 | -8.9 | -2.1 | -6.8 |
| dLt5,72,11: | 232.8 | 1.56 | 28.4 | 35.3 | 44.9 | -9.5 | -2.1 | -7.5 |
| dL ${ }_{\text {t5,78,11 }}$ : | 232.8 | 1.56 | 27.6 | 34.0 | 44.1 | -10.1 | -2.1 | -8.0 |
| $\mathrm{dL}_{\text {t5,81,11: }}$ | 232.8 | 1.56 | 27.1 | 34.5 | 43.6 | -9.0 | -2.1 | -7.0 |
| dL ${ }_{\text {t5,82,11: }}$ | 232.8 | 1.56 | 28.2 | 34.4 | 44.6 | -10.2 | -2.1 | -8.2 |
| dL t5,83,11: | 232.8 | 1.56 | 28.0 | 35.2 | 44.4 | -9.2 | -2.1 | -7.2 |
| $\mathrm{dL}_{\text {t5,85,11: }}$ | 232.8 | 1.56 | 28.1 | 38.0 | 44.5 | -6.4 | -2.1 | -4.4 |
| dLt5,95,11: | 232.8 | 1.56 | 29.1 | 35.2 | 45.6 | -10.4 | -2.1 | -8.3 |
| dL ${ }_{\text {t5,97,11: }}$ | 232.8 | 1.56 | 29.8 | 37.3 | 46.3 | -8.9 | -2.1 | -6.9 |
| $\mathrm{dL}_{\text {t5, 104,11: }}$ | 232.8 | 1.56 | 27.3 | 34.8 | 43.8 | -8.9 | -2.1 | -6.9 |
| dL $\mathrm{L}_{\mathrm{t}, 4,41}$ : | 307.8 | 1.56 | 26.0 | 33.1 | 42.6 | -9.5 | -2.1 | -7.4 |
| dL $\mathrm{t}_{\mathrm{t}, 6,11}$ : | 307.8 | 1.56 | 25.5 | 34.2 | 42.1 | -7.9 | -2.1 | -5.8 |
| dLt ${ }_{\text {t } 6,9,11}$ | 309.4 | 1.56 | 27.3 | 33.9 | 43.8 | -10.0 | -2.1 | -7.9 |
| dL t6,12,11: | 307.8 | 1.56 | 25.9 | 41.0 | 42.4 | -1.4 | -2.1 | 0.7 |
| $\mathrm{dL}_{\text {t6, } 13,11}$ : | 307.8 | 1.56 | 26.7 | 34.8 | 43.2 | -8.4 | -2.1 | -6.3 |
| $\mathrm{dL}_{\text {t6,14,11: }}$ | 309.4 | 1.56 | 26.3 | 34.7 | 42.9 | -8.2 | -2.1 | -6.1 |
| $\mathrm{dL}_{6,16,11}$ : | 309.4 | 1.56 | 25.7 | 36.3 | 42.3 | -5.9 | -2.1 | -3.8 |
| dL t6,17,11: | 307.8 | 1.56 | 26.2 | 39.7 | 42.7 | -3.1 | -2.1 | -0.9 |
| $\mathrm{dL}_{6,18,11}$ : | 307.8 | 1.56 | 26.2 | 32.9 | 42.7 | -9.8 | -2.1 | -7.7 |
| $\mathrm{dL}_{66,20,11}$ : | 307.8 | 1.56 | 26.5 | 36.1 | 43.0 | -6.9 | -2.1 | -4.8 |
| dL t6,51,11: | 325.0 | 1.56 | 27.2 | 35.9 | 43.8 | -7.9 | -2.1 | -5.7 |
| $\mathrm{dL}_{66,57,11}$ : | 325.0 | 1.56 | 25.1 | 31.2 | 41.7 | -10.6 | -2.1 | -8.4 |
| dL t6,75,11: | 325.0 | 1.56 | 26.1 | 35.1 | 42.7 | -7.6 | -2.1 | -5.5 |
| dL $\mathrm{t6,76,11}$ | 325.0 | 1.56 | 26.4 | 34.7 | 43.0 | -8.3 | -2.1 | -6.2 |

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| $\mathrm{dL}_{6,77,11}$ : | 325.0 | 1.56 | 26.7 | 36.9 | 43.3 | -6.4 | -2.1 | -4.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL t6,78,11: | 325.0 | 1.56 | 26.7 | 35.7 | 43.3 | -7.6 | -2.1 | -5.5 |
| dL t6,82,11: | 325.0 | 1.56 | 26.8 | 32.8 | 43.3 | -10.6 | -2.1 | -8.4 |
| dLt6,92,11: | 323.5 | 1.56 | 26.6 | 34.3 | 43.2 | -8.9 | -2.1 | -6.7 |
| $\mathrm{dL}_{\text {t6,94,11: }}$ | 325.0 | 1.56 | 27.2 | 34.4 | 43.8 | -9.3 | -2.1 | -7.2 |
| $\mathrm{dL}_{\text {t6,97,11: }}$ | 325.0 | 1.56 | 29.0 | 35.6 | 45.6 | -10.0 | -2.1 | -7.9 |
| $\mathrm{dL}_{\text {t6, 102,11: }}$ | 325.0 | 1.56 | 27.1 | 37.6 | 43.7 | -6.1 | -2.1 | -3.9 |
| $\mathrm{dL}_{6,103,11}$ : | 325.0 | 1.56 | 27.0 | 35.3 | 43.6 | -8.3 | -2.1 | -6.1 |
| dLt7,14,11: | 7633.3 | 1.56 | -16.3 | -9.9 | 12.7 | -22.6 | -5.0 | -17.6 |
| $\mathrm{dL}_{\text {t7,67,11: }}$ | 7648.9 | 1.56 | -16.3 | -8.9 | 12.7 | -21.6 | -5.0 | -16.6 |
| $\mathrm{dL}_{18,86,11}$ : | 7998.9 | 1.56 | -16.4 | -10.3 | 12.9 | -23.3 | -5.0 | -18.3 |
| $\mathrm{dL}_{18,97,11}$ : | 8058.3 | 1.56 | -17.2 | -11.1 | 12.1 | -23.2 | -5.0 | -18.2 |

BIN 11: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\mathrm{ta}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -2.8 | --- | --- | 142.2 | -1.3 | --- | --- | --- | --- | --- | --- |
| 2 | 71.9 | 0.4 | --- | --- | --- | --- | 175.0 | -8.7 | --- | --- | --- | --- |
| 3 | 68.8 | -4.7 | --- | --- | --- | --- | 175.0 | -2.8 | 232.8 | -8.1 | --- | --- |
| 4 | 70.3 | -6.2 | --- | --- | --- | --- | 175.0 | -3.8 | 232.8 | -8.5 | 307.8 | -9.5 |
| 5 | 70.3 | -8.8 | --- | --- | 142.2 | -7.5 | --- | --- | --- | --- | --- | --- |
| 6 | 70.3 | -2.5 | --- | --- | 140.6 | -1.9 | --- | --- | 232.8 | -10.4 | 307.8 | -7.9 |
| 7 | 70.3 | -1.6 | --- | --- | 140.6 | -1.4 | --- | --- | 232.8 | -10.2 | --- | --- |
| 8 | 68.8 | -1.3 | --- | --- | --- | --- | 175.0 | -1.4 | 232.8 | -8.3 | --- | --- |
| 9 | 82.8 | -6.1 | 82.8 | -6.1 | 139.1 | -7.5 | --- | --- | --- | --- | 309.4 | -10.0 |
| 10 | 70.3 | -7.6 | --- | --- | --- | --- | 175.0 | -8.1 | 232.8 | -9.6 | --- | --- |
| 11 | 70.3 | -8.6 | --- | --- | 139.1 | -1.9 | --- | --- | 232.8 | -9.8 | --- | --- |
| 12 | 71.9 | -3.2 | --- | --- | 142.2 | -1.6 | --- | --- | --- | --- | 307.8 | -1.4 |
| 13 | --- | --- | --- | --- | 139.1 | -5.4 | --- | --- | --- | --- | 307.8 | -8.4 |
| 14 | 68.8 | -8.0 | --- | --- | 139.1 | -7.2 | --- | --- | --- | --- | 309.4 | -8.2 |
| 15 | 68.8 | -4.7 | --- | --- | 139.1 | -3.2 | --- | --- | --- | --- | --- | --- |
| 16 | 70.3 | -5.3 | --- | --- | --- | --- | 175.0 | -4.9 | 232.8 | -7.6 | 309.4 | -5.9 |
| 17 | 70.3 | -9.8 | --- | --- | 139.1 | -7.6 | --- | --- | --- | --- | 307.8 | -3.1 |
| 18 | 68.8 | -6.0 | --- | --- | --- | --- | 175.0 | -1.8 | --- | --- | 307.8 | -9.8 |
| 19 | 68.8 | -2.6 | --- | --- | 139.1 | -6.6 | --- | --- | --- | --- | --- | --- |
| 20 | 71.9 | -2.7 | --- | --- | --- | --- | 175.0 | -6.5 | --- | --- | 307.8 | -6.9 |
| 21 | 68.8 | -9.2 | --- | --- | --- | --- | 175.0 | -4.3 | --- | --- | --- | --- |
| 22 | 70.3 | -5.4 | --- | --- | 140.6 | -3.2 | --- | -- | --- | --- | --- | --- |
| 23 | 71.9 | -1.8 | --- | --- | 142.2 | 1.4 | --- | --- | 232.8 | -10.3 | --- | --- |
| 24 | 70.3 | 0.2 | --- | --- | 142.2 | -3.7 | --- | --- | 232.8 | -9.2 | --- | --- |
| 25 | 71.9 | -2.6 | --- | --- | 142.2 | -4.5 | --- | --- | --- | --- | --- | --- |
| 26 | 71.9 | -5.8 | --- | --- | --- | --- | 175.0 | -4.3 | 232.8 | -8.6 | --- | --- |
| 27 | 71.9 | -3.4 | --- | --- | --- | --- | 175.0 | -4.8 | 232.8 | -10.4 | --- | --- |
| 28 | 68.8 | -8.6 | --- | --- | 139.1 | 0.9 | --- | --- | 232.8 | -10.4 | --- | --- |
| 29 | 68.8 | -4.9 | --- | --- | 137.5 | -5.8 | --- | --- | 232.8 | -9.1 | --- | --- |
| 30 | 71.9 | -2.4 | --- | --- | 143.8 | -8.5 | --- | --- | --- | --- | --- | --- |
| 31 | 68.8 | -3.5 | --- | --- | 139.1 | -2.4 | --- | --- | 232.8 | -9.3 | --- | --- |
| 32 | 71.9 | -5.6 | --- | --- | 140.6 | -6.8 | --- | --- | --- | --- | --- | --- |
| 33 | --- | --- | 98.4 | -0.3 | --- | --- | 175.0 | -3.7 | --- | --- | --- | --- |
| 34 | --- | --- | 89.1 | -9.5 | --- | --- | 175.0 | -7.5 | --- | --- | --- | --- |
| 35 | 70.3 | -7.7 | --- | --- | --- | --- | 175.0 | -1.4 | 232.8 | -10.1 | --- | --- |
| 36 | 70.3 | -5.6 | --- | --- | 140.6 | -3.6 | --- | --- | --- | --- | --- | --- |
| 37 | 68.8 | -3.9 | --- | --- | --- | --- | 175.0 | -1.4 | 232.8 | -8.0 | --- | --- |
| 38 | 70.3 | -2.6 | --- | --- | --- | --- | 175.0 | -3.5 | --- | --- | --- | --- |

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| 39 | 68.8 | -6.3 | --- | --- | --- | --- | 175.0 | -3.3 | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40 | 68.8 | -5.4 | --- | --- | --- | --- | 175.0 | -3.4 | --- | --- | --- | --- |
| 41 | 70.3 | -6.5 | -- | --- | --- | --- | 175.0 | -4.1 | 232.8 | -9.8 | --- | --- |
| 42 | 71.9 | -5.6 | --- | --- | --- | --- | 175.0 | -5.6 | 232.8 | -10.4 | --- | --- |
| 43 | 68.8 | -5.2 | --- | --- | --- | --- | 175.0 | -4.5 | 232.8 | -8.8 | --- | --- |
| 44 | 68.8 | -6.5 | --- | --- | --- | --- | 175.0 | -7.7 | --- | --- | --- | --- |
| 45 | 71.9 | -3.3 | --- | --- | --- | --- | 175.0 | -6.1 | 232.8 | -9.9 | --- | --- |
| 46 | 68.8 | -4.4 | --- | --- | --- | --- | 175.0 | -8.3 | --- | --- | --- | --- |
| 47 | 70.3 | -9.4 | --- | --- | 140.6 | -3.2 | --- | --- | --- | --- | --- | --- |
| 48 | 71.9 | -5.9 | --- | --- | 142.2 | -7.1 | --- | --- | --- | --- | --- | --- |
| 49 | 71.9 | -2.7 | --- | --- | 146.9 | -9.2 | --- | --- | 232.8 | -10.0 | --- | --- |
| 50 | 68.8 | -3.4 | -- | --- | --- | --- | 175.0 | -3.3 | --- | --- | --- | --- |
| 51 | 68.8 | -6.1 | --- | --- | 139.1 | -2.8 | --- | --- | --- | --- | 325.0 | -7.9 |
| 52 | 75.0 | -2.4 | --- | --- | --- | --- | 175.0 | -6.7 | 232.8 | -8.8 | --- | --- |
| 53 | 68.8 | 0.0 | --- | --- | --- | --- | 175.0 | -3.2 | --- | --- | --- | --- |
| 54 | 70.3 | -6.8 | --- | --- | 140.6 | -2.2 | --- | --- | 232.8 | -9.2 | --- | --- |
| 55 | --- | --- | --- | --- | 139.1 | -1.4 | --- | --- | 232.8 | -10.3 | --- | --- |
| 56 | 70.3 | -4.9 | --- | --- | 142.2 | -2.9 | --- | --- | 232.8 | -7.9 | --- | --- |
| 57 | 68.8 | -4.0 | --- | --- | --- | --- | 175.0 | -2.1 | 232.8 | -8.6 | 325.0 | -10.6 |
| 58 | 68.8 | -7.1 | --- | --- | --- | --- | 175.0 | -4.6 | 232.8 | -10.0 | --- | --- |
| 59 | 73.4 | -3.3 | --- | --- | 143.8 | -3.0 | --- | --- | 232.8 | -9.2 | --- | --- |
| 60 | 68.8 | -2.1 | --- | --- | --- | --- | 175.0 | -2.6 | --- | --- | --- | --- |
| 61 | 68.8 | -6.2 | --- | --- | --- | --- | 175.0 | -5.0 | --- | --- | --- | --- |
| 62 | 68.8 | -5.7 | --- | --- | --- | -- | 175.0 | -4.9 | --- | --- | --- | --- |
| 63 | --- | --- | --- | --- | --- | --- | 175.0 | -6.5 | 232.8 | -7.3 | --- | --- |
| 64 | 68.8 | -1.2 | --- | --- | --- | --- | 175.0 | -3.7 | 232.8 | -9.1 | --- | --- |
| 65 | 68.8 | -3.4 | --- | --- | --- | --- | 175.0 | -5.0 | 232.8 | -9.9 | --- | --- |
| 66 | 70.3 | -8.2 | --- | --- | --- | --- | 175.0 | -5.5 | --- | --- | --- | --- |
| 67 | 71.9 | -2.9 | --- | --- | 142.2 | 1.4 | --- | --- | 232.8 | -8.9 | --- | --- |
| 68 | 70.3 | 0.0 | --- | -- | 140.6 | -0.6 | --- | --- | 232.8 | -8.7 | --- | -- |
| 69 | 68.8 | -2.6 | --- | --- | --- | --- | 175.0 | -1.7 | --- | --- | --- | --- |
| 70 | 71.9 | -5.3 | --- | --- | --- | --- | 175.0 | -6.0 | 232.8 | -10.0 | --- | --- |
| 71 | --- | --- | 106.3 | -0.9 | --- | --- | 175.0 | -4.2 | 232.8 | -8.9 | --- | --- |
| 72 | --- | --- | 93.8 | 4.1 | 142.2 | -2.5 | --- | --- | 232.8 | -9.5 | --- | --- |
| 73 | 71.9 | -10.2 | --- | --- | 139.1 | -6.1 | --- | --- | --- | --- | --- | --- |
| 74 | 71.9 | -4.3 | --- | --- | -- | --- | 175.0 | -3.8 | --- | --- | --- | --- |
| 75 | 68.8 | -7.9 | --- | --- | --- | --- | 175.0 | -3.4 | --- | --- | 325.0 | -7.6 |
| 76 | 68.8 | -4.4 | --- | --- | --- | --- | 175.0 | -3.0 | --- | --- | 325.0 | -8.3 |
| 77 | 68.8 | -4.2 | --- | --- | 139.1 | -5.2 | --- | --- | --- | --- | 325.0 | -6.4 |
| 78 | 73.4 | -4.9 | --- | --- | --- | --- | 175.0 | -3.3 | 232.8 | -10.1 | 325.0 | -7.6 |
| 79 | 71.9 | -7.1 | --- | --- | --- | --- | 175.0 | -4.7 | --- | --- | --- | --- |
| 80 | 71.9 | -2.8 | --- | --- | --- | --- | 175.0 | -9.7 | --- | --- | --- | --- |
| 81 | 71.9 | -9.4 | --- | --- | --- | --- | 175.0 | -8.2 | 232.8 | -9.0 | --- | --- |
| 82 | 68.8 | -10.1 | --- | --- | --- | --- | 175.0 | -8.4 | 232.8 | -10.2 | 325.0 | -10.6 |
| 83 | 70.3 | -8.2 | --- | --- | 139.1 | -0.7 | --- | --- | 232.8 | -9.2 | --- | --- |
| 84 | 71.9 | -2.7 | --- | --- | --- | --- | 175.0 | -2.1 | --- | --- | --- | --- |
| 85 | 71.9 | -3.9 | --- | --- | 142.2 | -0.2 | --- | --- | 232.8 | -6.4 | --- | --- |
| 86 | 71.9 | -2.5 | --- | --- | 142.2 | 1.6 | --- | --- | --- | --- | --- | --- |
| 87 | 68.8 | -0.6 | --- | --- | 139.1 | -1.0 | --- | --- | --- | --- | --- | --- |
| 88 | 70.3 | -4.7 | --- | --- | --- | --- | 175.0 | -5.0 | --- | --- | --- | --- |
| 89 | 68.8 | -6.8 | --- | --- | 139.1 | -4.4 | --- | --- | --- | --- | --- | --- |
| 90 | 76.6 | -8.4 | --- | --- | 140.6 | -2.2 | --- | --- | --- | --- | --- | --- |
| 91 | 70.3 | -8.1 | --- | --- | 140.6 | -6.4 | --- | --- | --- | --- | --- | --- |
| 92 | 75.0 | -4.6 | --- | --- | --- | --- | 175.0 | -8.4 | --- | --- | 323.5 | -8.9 |

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| 93 | 68.8 | -6.1 | --- | --- | 139.1 | -4.4 | --- | --- | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 94 | 70.3 | -7.9 | --- | --- | 140.6 | -2.4 | --- | --- | --- | --- | 325.0 | -9.3 |
| 95 | 70.3 | -7.5 | --- | --- | 139.1 | -3.7 | --- | --- | 232.8 | -10.4 | --- | --- |
| 96 | --- | --- | --- | --- | --- | --- | 175.0 | -6.8 | --- | --- | --- | --- |
| 97 | 70.3 | -7.3 | --- | --- | --- | --- | 175.0 | -6.8 | 232.8 | -8.9 | 325.0 | -10.0 |
| 98 | 70.3 | -9.1 | --- | --- | 140.6 | -7.6 | --- | --- | --- | --- | --- | --- |
| 99 | 71.9 | -7.9 | --- | --- | 142.2 | -8.2 | --- | --- | --- | --- | --- | --- |
| 100 | 68.8 | -4.9 | --- | --- | --- | --- | 175.0 | -7.3 | --- | --- | --- | --- |
| 101 | 68.8 | -5.1 | --- | --- | 139.1 | -3.6 | --- | --- | --- | --- | --- | --- |
| 102 | 70.3 | -5.4 | --- | --- | 140.6 | -4.2 | --- | --- | --- | --- | 325.0 | -6.1 |
| 103 | 70.3 | -7.5 | --- | --- | 140.6 | -6.0 | --- | --- | --- | --- | 325.0 | -8.3 |
| 104 | 68.8 | -7.1 | --- | --- | 139.1 | -4.8 | --- | --- | 232.8 | -8.9 | --- | --- |
| 105 | 70.3 | -9.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 106 | 70.3 | -5.1 | --- | --- | 140.6 | -4.3 | --- | --- | --- | --- | --- | --- |
| $\mathrm{ft}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 70.6 | -4.7 | 98.2 | -11.8 | 141.4 | -5.8 | 175.0 | -7.1 | 232.8 | -11.9 | 309.8 | -12.4 |
| $\mathrm{L}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| dLa,k[dB] |  | -2.7 |  | -9.8 |  | -3.8 |  | -5.1 |  | -9.8 |  | -10.3 |
| $\mathrm{K}_{\text {to }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |




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| BIN 11.5: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | $\mathrm{L}_{\text {pr,avg, }, \mathrm{k}}$ | $\mathrm{Lppt,j}, \mathrm{k}$ | Lpn,j,k | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\text {aj, }, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| $\mathrm{dL}_{\text {ti, } 1,11.5}$ : | 70.3 | 1.56 | 22.0 | 36.4 | 38.3 | -1.9 | -2.0 | 0.1 |
| $\mathrm{dL}_{\text {t1,2,11.5: }}$ | 73.4 | 1.56 | 22.9 | 39.0 | 39.2 | -0.2 | -2.0 | 1.8 |
| $\mathrm{dL}_{11,3,11.5}$ : | 73.4 | 1.56 | 24.5 | 36.8 | 40.8 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\mathrm{t} 1,4,11,5}$ : | 75.0 | 1.56 | 23.0 | 38.6 | 39.3 | -0.7 | -2.0 | 1.3 |
| $\mathrm{dL}_{\text {t1,5,11.5: }}$ | 71.9 | 1.56 | 23.1 | 38.4 | 39.4 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{11,6,11.5}$ | 84.4 | 1.56 | 24.0 | 37.0 | 40.3 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\mathrm{t} 1,7,11,5}$ | 82.8 | 1.56 | 28.1 | 34.3 | 44.4 | -10.0 | -2.0 | -8.0 |
| $\mathrm{dL}_{\text {t1,8,11.5: }}$ | 71.9 | 1.56 | 25.8 | 36.2 | 42.1 | -5.9 | -2.0 | -3.9 |
| $\mathrm{dL}_{\text {t1,9,11.5: }}$ | 71.9 | 1.56 | 26.6 | 34.1 | 42.9 | -8.8 | -2.0 | -6.8 |
| $\mathrm{dL}_{\text {t1, } 10,11.5}$ : | 70.3 | 1.56 | 23.2 | 36.0 | 39.5 | -3.4 | -2.0 | -1.4 |
| dLti,11,11.5: | 71.9 | 1.56 | 25.4 | 38.3 | 41.7 | -3.4 | -2.0 | -1.4 |
| $\mathrm{dL}_{\mathrm{t}_{1,13,11.5} \text { : }}$ | 70.3 | 1.56 | 24.0 | 34.7 | 40.3 | -5.6 | -2.0 | -3.6 |
| $\mathrm{dL}_{\mathrm{t}_{1,14,11,5} \text { : }}$ | 71.9 | 1.56 | 24.6 | 31.0 | 40.9 | -9.9 | -2.0 | -7.9 |
| $\mathrm{dL}_{\mathrm{t}_{1}, 15,11,5}$ | 73.4 | 1.56 | 25.2 | 36.9 | 41.5 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{\mathrm{t}_{1,16,11,5}}$ | 71.9 | 1.56 | 26.2 | 32.2 | 42.5 | -10.3 | -2.0 | -8.3 |
| dLti,17,11.5: | 71.9 | 1.56 | 24.8 | 34.8 | 41.1 | -6.3 | -2.0 | -4.3 |
| $\mathrm{dL}_{\mathrm{t}_{1}, 18,11,5}$ | 71.9 | 1.56 | 25.9 | 33.6 | 42.2 | -8.5 | -2.0 | -6.5 |
| dLti,20,11.5: | 75.0 | 1.56 | 25.0 | 35.8 | 41.3 | -5.5 | -2.0 | -3.5 |
| $\mathrm{dL}_{\text {t1, 21,11.5: }}$ | 71.9 | 1.56 | 25.8 | 36.0 | 42.1 | -6.1 | -2.0 | -4.1 |
| $\mathrm{dL}_{11,22,11.5}$ | 71.9 | 1.56 | 24.2 | 36.1 | 40.5 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{\text {t1, 23,11.5: }}$ | 71.9 | 1.56 | 23.4 | 36.7 | 39.7 | -3.0 | -2.0 | -1.0 |
| $\mathrm{dL}_{\text {t1, 24,11.5: }}$ | 73.4 | 1.56 | 24.8 | 37.5 | 41.1 | -3.6 | -2.0 | -1.6 |
| dLti,26,11.5: | 71.9 | 1.56 | 23.4 | 39.0 | 39.7 | -0.7 | -2.0 | 1.3 |
| dL ${ }_{\text {t1, 27,11.5: }}$ | 70.3 | 1.56 | 23.1 | 36.7 | 39.4 | -2.7 | -2.0 | -0.7 |
| $\mathrm{dL}_{\text {t1, 28,11.5: }}$ | 68.8 | 1.56 | 24.3 | 35.8 | 40.6 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t}_{1,29,11.5} \text { : }}$ | 75.0 | 1.56 | 25.4 | 35.5 | 41.7 | -6.2 | -2.0 | -4.2 |
| $\mathrm{dL}_{\text {t1,30,11.5: }}$ | 73.4 | 1.56 | 23.9 | 36.9 | 40.2 | -3.3 | -2.0 | -1.3 |
| dL ${ }_{\text {t1,31,11.5: }}$ | 71.9 | 1.56 | 25.3 | 33.9 | 41.6 | -7.7 | -2.0 | -5.7 |
| dLti,34,11.5: | 71.9 | 1.56 | 25.0 | 34.9 | 41.3 | -6.4 | -2.0 | -4.4 |
| $\mathrm{dL}_{\text {t1,35,11.5: }}$ | 71.9 | 1.56 | 24.8 | 35.4 | 41.1 | -5.7 | -2.0 | -3.7 |
| $\mathrm{dL}_{\text {t1,36,11.5: }}$ | 70.3 | 1.56 | 24.2 | 33.5 | 40.5 | -7.0 | -2.0 | -5.0 |
| $\mathrm{dL}_{\text {t1,37,11.5: }}$ | 73.4 | 1.56 | 26.2 | 36.8 | 42.5 | -5.7 | -2.0 | -3.7 |
| dLti,39,11.5: | 71.9 | 1.56 | 25.4 | 37.1 | 41.7 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\text {t1,41,11.5: }}$ | 71.9 | 1.56 | 25.3 | 33.5 | 41.6 | -8.1 | -2.0 | -6.1 |
| dLti,42,11.5: | 68.8 | 1.56 | 22.8 | 34.2 | 39.1 | -4.9 | -2.0 | -2.9 |
| dL ${ }_{\text {t1,44,11.5: }}$ | 87.5 | 1.56 | 28.3 | 36.9 | 44.6 | -7.7 | -2.0 | -5.7 |
| $\mathrm{dL}_{11,45,11.5}$ | 85.9 | 1.56 | 23.3 | 40.2 | 39.6 | 0.6 | -2.0 | 2.6 |
| $\mathrm{dL}_{11,46,11.5}$ | 71.9 | 1.56 | 25.9 | 37.2 | 42.2 | -5.0 | -2.0 | -3.0 |
| $\mathrm{dL}_{11,47,11.5}$ | 75.0 | 1.56 | 26.2 | 33.1 | 42.5 | -9.5 | -2.0 | -7.5 |
| $\mathrm{dL}_{11,48,11.5}$ | 71.9 | 1.56 | 26.1 | 34.2 | 42.4 | -8.2 | -2.0 | -6.2 |
| dL ${ }_{\text {t1,49,11.5: }}$ | 73.4 | 1.56 | 24.4 | 36.5 | 40.7 | -4.2 | -2.0 | -2.2 |
| $\mathrm{dL}_{\text {t1, 50,11.5: }}$ | 71.9 | 1.56 | 22.4 | 33.7 | 38.7 | -5.0 | -2.0 | -3.0 |
| $\mathrm{dL}_{\text {t1, 51,11.5: }}$ | 71.9 | 1.56 | 27.0 | 36.7 | 43.3 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\text {t1, 52,11.5: }}$ | 73.4 | 1.56 | 26.7 | 34.5 | 43.0 | -8.5 | -2.0 | -6.5 |
| dLti,53,11,5: | 71.9 | 1.56 | 25.5 | 37.8 | 41.8 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\text {t1, 54,11.5: }}$ | 71.9 | 1.56 | 26.8 | 38.3 | 43.1 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{11,55,11.5}$ | 71.9 | 1.56 | 25.4 | 35.2 | 41.7 | -6.5 | -2.0 | -4.5 |
| dLte,12,11.5: | 115.6 | 1.56 | 23.9 | 33.7 | 40.2 | -6.5 | -2.0 | -4.5 |
| dL ${ }_{\text {t2, 25,11.5: }}$ | 106.3 | 1.56 | 28.8 | 36.3 | 45.1 | -8.8 | -2.0 | -6.8 |
| dLita ${ }^{\text {di,11.5: }}$ | 101.6 | 1.56 | 28.7 | 38.2 | 45.0 | -6.8 | -2.0 | -4.8 |
| $\mathrm{dL}_{\mathrm{t}, 1,11.5}$ : | 142.2 | 1.56 | 25.5 | 37.9 | 41.8 | -3.9 | -2.0 | -1.9 |

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| dL ${ }_{\text {t3,2,11.5: }}$ | 145.3 | 1.56 | 26.8 | 35.4 | 43.1 | -7.8 | -2.0 | -5.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dLit3,3,11.5: | 142.2 | 1.56 | 28.2 | 44.4 | 44.5 | -0.1 | -2.0 | 1.9 |
| dL ${ }_{\text {t3, }, 111.5}$ : | 142.2 | 1.56 | 28.9 | 39.7 | 45.2 | -5.5 | -2.0 | -3.5 |
| dLt3,9,11.5: | 142.2 | 1.56 | 28.4 | 42.3 | 44.7 | -2.4 | -2.0 | -0.4 |
| $\mathrm{dL}_{\text {[3,11,11.5: }}$ | 143.8 | 1.56 | 28.1 | 40.4 | 44.4 | -4.0 | -2.0 | -1.9 |
| $\mathrm{dL}_{\text {+3,12,11.5: }}$ | 142.2 | 1.56 | 26.9 | 40.7 | 43.2 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{\text {ti,13,11.5: }}$ | 140.6 | 1.56 | 27.3 | 42.8 | 43.6 | -0.8 | -2.0 | 1.2 |
| $\mathrm{dL}_{\text {3, 14,11.5: }}$ | 142.2 | 1.56 | 27.3 | 43.1 | 43.6 | -0.5 | -2.0 | 1.5 |
| dL ${ }_{\text {L3,23,11.5: }}$ | 142.2 | 1.56 | 27.0 | 39.3 | 43.3 | -4.1 | -2.0 | -2.1 |
| $\mathrm{dL}_{\text {L3,27,11.5: }}$ | 142.2 | 1.56 | 27.9 | 43.6 | 44.2 | -0.7 | -2.0 | 1.4 |
| dL ${ }_{\text {ti,30,11,5: }}$ | 148.4 | 1.56 | 26.9 | 34.7 | 43.2 | -8.5 | -2.0 | -6.5 |
| $\mathrm{dL}_{\text {t3,32,11.5: }}$ | 142.2 | 1.56 | 28.4 | 41.5 | 44.7 | -3.2 | -2.0 | -1.2 |
| $\mathrm{dL}_{\text {ti,33,11.5: }}$ | 140.6 | 1.56 | 29.3 | 35.6 | 45.6 | -10.0 | -2.0 | -7.9 |
| dLix,35,11.5: | 142.2 | 1.56 | 27.6 | 41.4 | 43.9 | -2.5 | -2.0 | -0.5 |
| $\mathrm{dL}_{13,36,11.5}$ | 140.6 | 1.56 | 27.2 | 40.0 | 43.5 | -3.4 | -2.0 | -1.4 |
| dL ${ }_{\text {ti,39,11.5: }}$ | 142.2 | 1.56 | 27.8 | 42.5 | 44.1 | -1.6 | -2.0 | 0.4 |
| $\mathrm{dL}_{\text {t, 41,11.5: }}$ | 142.2 | 1.56 | 27.3 | 35.2 | 43.6 | -8.5 | -2.0 | -6.4 |
| $\mathrm{dL}_{\text {[3,45,11.5: }}$ | 142.2 | 1.56 | 26.6 | 38.5 | 42.9 | -4.4 | -2.0 | -2.4 |
| dLix,55,11.5: | 142.2 | 1.56 | 28.3 | 42.9 | 44.6 | -1.7 | -2.0 | 0.3 |
| dL $\mathrm{ta,4,11.5}$ | 175.0 | 1.56 | 27.3 | 38.3 | 43.6 | -5.3 | -2.0 | -3.3 |
| dLti4,5,11.5: | 175.0 | 1.56 | 27.0 | 38.7 | 43.3 | -4.6 | -2.0 | -2.6 |
| dL $\mathrm{d}_{44,6,11.5}$ : | 175.0 | 1.56 | 26.9 | 39.5 | 43.2 | -3.7 | -2.0 | -1.7 |
| $\mathrm{dL}_{44,7,11.5}$ : | 175.0 | 1.56 | 28.5 | 34.9 | 44.8 | -9.9 | -2.0 | -7.8 |
| $\mathrm{dL}_{44,10,11.5}$ | 175.0 | 1.56 | 27.0 | 37.5 | 43.3 | -5.8 | -2.0 | -3.7 |
| $\mathrm{dL}_{\text {t4,16,11.5: }}$ | 175.0 | 1.56 | 28.9 | 39.4 | 45.2 | -5.8 | -2.0 | -3.8 |
| dLta,17,11.5: | 175.0 | 1.56 | 28.7 | 38.2 | 45.0 | -6.8 | -2.0 | -4.8 |
| dLt4,18,11.5: | 175.0 | 1.56 | 29.2 | 38.4 | 45.5 | -7.1 | -2.0 | -5.0 |
| dL ${ }_{\text {t4, 19,11.5: }}$ | 175.0 | 1.56 | 28.8 | 35.6 | 45.1 | -9.6 | -2.0 | -7.5 |
| dL ${ }_{\text {t4, } 20,11.5}$ : | 175.0 | 1.56 | 27.6 | 36.9 | 43.9 | -7.1 | -2.0 | -5.0 |
| $\mathrm{dL}_{44,21,11.5}$ | 175.0 | 1.56 | 29.0 | 35.6 | 45.3 | -9.8 | -2.0 | -7.7 |
| dLta, 22,11.5: | 175.0 | 1.56 | 28.6 | 39.8 | 44.9 | -5.1 | -2.0 | -3.1 |
| dLt4, 24,11.5: | 175.0 | 1.56 | 28.1 | 39.0 | 44.4 | -5.5 | -2.0 | -3.4 |
| $\mathrm{dL}_{44,25,11.5}$ | 175.0 | 1.56 | 29.0 | 38.5 | 45.3 | -6.8 | -2.0 | -4.8 |
| $\mathrm{dL}_{\text {t4, 26,11.5: }}$ | 175.0 | 1.56 | 27.4 | 41.8 | 43.7 | -1.9 | -2.0 | 0.1 |
| dL ${ }_{\text {t4, 28,11.5: }}$ | 175.0 | 1.56 | 28.0 | 37.7 | 44.3 | -6.7 | -2.0 | -4.6 |
| dLt4, 29,11.5: | 175.0 | 1.56 | 28.5 | 40.1 | 44.8 | -4.7 | -2.0 | -2.7 |
| dL ${ }_{\text {t4,34,11,5: }}$ | 175.0 | 1.56 | 28.1 | 35.9 | 44.4 | -8.5 | -2.0 | -6.5 |
| dLta,37,11.5: | 175.0 | 1.56 | 29.0 | 39.1 | 45.3 | -6.1 | -2.0 | -4.1 |
| dLti4,40,11.5: | 175.0 | 1.56 | 28.6 | 40.5 | 44.9 | -4.4 | -2.0 | -2.4 |
| $\mathrm{dL}_{\text {t4,46,11.5: }}$ | 175.0 | 1.56 | 28.7 | 39.3 | 45.0 | -5.6 | -2.0 | -3.6 |
| $\mathrm{dL}_{44,49,11.5}$ | 175.0 | 1.56 | 28.1 | 40.1 | 44.4 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\text {t4,50,11.5: }}$ | 175.0 | 1.56 | 26.4 | 38.9 | 42.7 | -3.9 | -2.0 | -1.8 |
| dLt4,53,11.5: | 175.0 | 1.56 | 28.7 | 34.7 | 45.0 | -10.2 | -2.0 | -8.2 |
| dLt5,1,11.5: | 232.8 | 1.56 | 26.2 | 34.0 | 42.6 | -8.6 | -2.1 | -6.5 |
| $\mathrm{dL}_{\text {t5,3,11.5: }}$ | 232.8 | 1.56 | 28.7 | 37.0 | 45.1 | -8.1 | -2.1 | -6.1 |
| $\mathrm{dL}_{\text {t5,5,11.5: }}$ | 232.8 | 1.56 | 26.9 | 35.4 | 43.4 | -8.0 | -2.1 | -5.9 |
| $\mathrm{dL}_{\text {t5,6,11.5: }}$ | 232.8 | 1.56 | 26.7 | 34.1 | 43.1 | -9.1 | -2.1 | -7.0 |
| dLt5,9,11.5: | 232.8 | 1.56 | 27.7 | 34.4 | 44.1 | -9.7 | -2.1 | -7.7 |
| $\mathrm{dL}_{\text {t5, 10,11.5: }}$ | 232.8 | 1.56 | 26.6 | 33.9 | 43.1 | -9.1 | -2.1 | -7.1 |
| $\mathrm{dL}_{\text {t5,11,11.5: }}$ | 232.8 | 1.56 | 26.9 | 34.1 | 43.3 | -9.3 | -2.1 | -7.2 |
| dLt5,12,11.5: | 232.8 | 1.56 | 26.8 | 34.1 | 43.2 | -9.1 | -2.1 | -7.0 |
| $\mathrm{dL}_{\text {t5,13,11.5: }}$ | 232.8 | 1.56 | 26.8 | 33.5 | 43.2 | -9.8 | -2.1 | -7.7 |
| dLt5,14,11.5: | 232.8 | 1.56 | 26.9 | 33.2 | 43.3 | -10.1 | -2.1 | -8.0 |
| $\mathrm{dL}_{\text {t5,16,11.5: }}$ | 232.8 | 1.56 | 27.7 | 36.0 | 44.1 | -8.1 | -2.1 | -6.1 |

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| $\mathrm{dL}_{\text {t5,24,11.5: }}$ | 232.8 | 1.56 | 28.1 | 35.2 | 44.5 | -9.3 | -2.1 | -7.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t5, 25,11.5: }}$ | 232.8 | 1.56 | 28.5 | 36.4 | 45.0 | -8.6 | -2.1 | -6.6 |
| $\mathrm{dL}_{\text {t5,26,11.5: }}$ | 232.8 | 1.56 | 27.0 | 34.1 | 43.4 | -9.4 | -2.1 | -7.3 |
| dLt5,27,11.5: | 232.8 | 1.56 | 27.6 | 35.3 | 44.0 | -8.8 | -2.1 | -6.7 |
| dL ${ }_{\text {t5,34,11.5: }}$ | 232.8 | 1.56 | 28.0 | 35.3 | 44.4 | -9.1 | -2.1 | -7.1 |
| $\mathrm{dL}_{\text {t5,35,11.5: }}$ | 232.8 | 1.56 | 27.4 | 35.9 | 43.8 | -7.9 | -2.1 | -5.8 |
| $\mathrm{dL}_{\text {t5,37,11.5: }}$ | 232.8 | 1.56 | 28.9 | 36.0 | 45.3 | -9.3 | -2.1 | -7.3 |
| dL ${ }_{\text {t5,39,11.5: }}$ | 232.8 | 1.56 | 27.7 | 34.9 | 44.1 | -9.2 | -2.1 | -7.2 |
| dLt5,40,11.5: | 232.8 | 1.56 | 27.6 | 35.0 | 44.0 | -9.0 | -2.1 | -6.9 |
| $\mathrm{dL}_{\text {t5,45,11.5: }}$ | 232.8 | 1.56 | 26.7 | 35.8 | 43.1 | -7.3 | -2.1 | -5.2 |
| $\mathrm{dL}_{\text {t5,46,11.5: }}$ | 232.8 | 1.56 | 28.6 | 35.3 | 45.0 | -9.7 | -2.1 | -7.6 |
| $\mathrm{dL}_{\text {t5,49,11.5: }}$ | 232.8 | 1.56 | 28.0 | 35.0 | 44.5 | -9.5 | -2.1 | -7.4 |
| $\mathrm{dL}_{\text {t5,50,11.5: }}$ | 232.8 | 1.56 | 26.6 | 33.8 | 43.0 | -9.2 | -2.1 | -7.1 |
| dLt5,56,11.5: | 232.8 | 1.56 | 27.4 | 34.3 | 43.8 | -9.6 | -2.1 | -7.5 |
| $\mathrm{dL}_{6,54,11.5}$ : | 257.8 | 1.56 | 29.9 | 39.6 | 46.3 | -6.7 | -2.1 | -4.6 |
| $\mathrm{dL}_{\mathrm{t}_{7,3,11,5} \text { : }}$ | 307.8 | 1.56 | 28.2 | 37.1 | 44.8 | -7.7 | -2.1 | -5.6 |
| $\mathrm{dL}_{\text {t7,4,11.5: }}$ | 309.4 | 1.56 | 26.4 | 34.0 | 43.0 | -9.0 | -2.1 | -6.9 |
| $\mathrm{dL}_{\text {t7,9,11.5: }}$ | 307.8 | 1.56 | 27.0 | 33.1 | 43.6 | -10.5 | -2.1 | -8.4 |
| dLt7,10,11.5: | 307.8 | 1.56 | 26.1 | 35.7 | 42.7 | -7.0 | -2.1 | -4.9 |
| $\mathrm{dL}_{\text {t7, 13,11.5: }}$ | 309.4 | 1.56 | 26.2 | 37.0 | 42.8 | -5.8 | -2.1 | -3.7 |
| dLt7,35,11.5: | 325.0 | 1.56 | 25.7 | 32.0 | 42.2 | -10.3 | -2.1 | -8.1 |
| $\mathrm{dL}_{\text {t7,36,11.5: }}$ | 325.0 | 1.56 | 26.3 | 32.7 | 42.9 | -10.2 | -2.1 | -8.1 |
| $\mathrm{dL}_{\text {t7,42,11.5: }}$ | 325.0 | 1.56 | 25.9 | 35.6 | 42.5 | -6.9 | -2.1 | -4.7 |
| $\mathrm{dL}_{\text {t7,43,11.5: }}$ | 325.0 | 1.56 | 27.6 | 35.7 | 44.1 | -8.5 | -2.1 | -6.3 |
| $\mathrm{dL}_{\text {t7, 52,11.5: }}$ | 325.0 | 1.56 | 26.9 | 33.8 | 43.5 | -9.7 | -2.1 | -7.6 |
| dLt7,55,11.5: | 325.0 | 1.56 | 26.7 | 32.8 | 43.3 | -10.4 | -2.1 | -8.3 |
| dL L8, $17,11.5^{\text {P }}$ | 7997.4 | 1.56 | -16.6 | -10.6 | 12.7 | -23.3 | -5.0 | -18.3 |
| $\mathrm{dL}_{\text {t8,19,11.5: }}$ | 7978.6 | 1.56 | -16.5 | -10.3 | 12.7 | -23.1 | -5.0 | -18.1 |
| $\mathrm{dL}_{\text {88,33,11.5: }}$ | 8013.0 | 1.56 | -16.6 | -9.2 | 12.7 | -21.8 | -5.0 | -16.8 |
| dL $\mathrm{L}_{8,49,11.5}$ : | 7916.1 | 1.56 | -16.7 | -10.6 | 12.5 | -23.1 | -5.0 | -18.1 |
| dLti8,51,11.5: | 7988.0 | 1.56 | -16.9 | -10.8 | 12.4 | -23.2 | -5.0 | -18.2 |

BIN 11.5: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | dLta, ${ }_{\text {, }}$ | $\mathrm{f}_{\mathbf{T}}$ | dLtn, $\mathrm{j}_{\text {, }}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | dLtn, ${ }_{\text {, }}$ | $\mathrm{f}_{\mathbf{T}}$ | dLtn, ${ }_{\text {, }}$ k | $\mathrm{f}_{\mathbf{T}}$ | dLtn,j,k |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 70.3 | -1.9 | --- | --- | 142.2 | -3.9 | --- | --- | 232.8 | -8.6 | --- | --- |
| 2 | 73.4 | -0.2 | --- | --- | 145.3 | -7.8 | --- | --- | --- | --- | --- | --- |
| 3 | 73.4 | -4.0 | --- | --- | 142.2 | -0.1 | --- | --- | 232.8 | -8.1 | --- | --- |
| 4 | 75.0 | -0.7 | --- | --- | --- | --- | 175.0 | -5.3 | --- | --- | --- | --- |
| 5 | 71.9 | -1.0 | --- | --- | --- | --- | 175.0 | -4.6 | 232.8 | -8.0 | --- | --- |
| 6 | 84.4 | -3.3 | --- | --- | --- | --- | 175.0 | -3.7 | 232.8 | -9.1 | --- | --- |
| 7 | 82.8 | -10.0 | --- | --- | --- | --- | 175.0 | -9.9 | --- | --- | --- | --- |
| 8 | 71.9 | -5.9 | --- | --- | 142.2 | -5.5 | --- | --- | --- | --- | --- | --- |
| 9 | 71.9 | -8.8 | --- | --- | 142.2 | -2.4 | --- | --- | 232.8 | -9.7 | --- | --- |
| 10 | 70.3 | -3.4 | --- | --- | --- | --- | 175.0 | -5.8 | 232.8 | -9.1 | --- | --- |
| 11 | 71.9 | -3.4 | --- | --- | 143.8 | -4.0 | --- | --- | 232.8 | -9.3 | -- | --- |
| 12 | --- | --- | 115.6 | -6.5 | 142.2 | -2.5 | --- | --- | 232.8 | -9.1 | --- | --- |
| 13 | 70.3 | -5.6 | --- | --- | 140.6 | -0.8 | --- | --- | 232.8 | -9.8 | --- | --- |
| 14 | 71.9 | -9.9 | --- | --- | 142.2 | -0.5 | --- | --- | 232.8 | -10.1 | --- | --- |
| 15 | 73.4 | -4.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 71.9 | -10.3 | --- | --- | --- | --- | 175.0 | -5.8 | 232.8 | -8.1 | --- | --- |
| 17 | 71.9 | -6.3 | --- | --- | --- | --- | 175.0 | -6.8 | --- | --- | --- | --- |
| 18 | 71.9 | -8.5 | --- | --- | --- | --- | 175.0 | -7.1 | --- | --- | --- | --- |
| 19 | --- | --- | --- | --- | --- | --- | 175.0 | -9.6 | --- | --- | --- | --- |

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| 20 | 75.0 | -5.5 | --- | --- | --- | --- | 175.0 | -7.1 | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 | 71.9 | -6.1 | --- | --- | --- | --- | 175.0 | -9.8 | --- | --- | --- | --- |
| 22 | 71.9 | -4.4 | --- | --- | --- | --- | 175.0 | -5.1 | --- | --- | --- | --- |
| 23 | 71.9 | -3.0 | --- | --- | 142.2 | -4.1 | --- | --- | --- | --- | --- | --- |
| 24 | 73.4 | -3.6 | --- | --- | --- | --- | 175.0 | -5.5 | 232.8 | -9.3 | --- | --- |
| 25 | --- | --- | 106.3 | -8.8 | --- | --- | 175.0 | -6.8 | 232.8 | -8.6 | --- | --- |
| 26 | 71.9 | -0.7 | --- | --- | --- | --- | 175.0 | -1.9 | 232.8 | -9.4 | --- | --- |
| 27 | 70.3 | -2.7 | --- | --- | 142.2 | -0.7 | --- | --- | 232.8 | -8.8 | --- | --- |
| 28 | 68.8 | -4.7 | --- | --- | --- | --- | 175.0 | -6.7 | --- | --- | --- | --- |
| 29 | 75.0 | -6.2 | --- | --- | --- | --- | 175.0 | -4.7 | --- | --- | --- | --- |
| 30 | 73.4 | -3.3 | --- | --- | 148.4 | -8.5 | --- | --- | --- | --- | --- | --- |
| 31 | 71.9 | -7.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 32 | --- | --- | --- | --- | 142.2 | -3.2 | --- | --- | --- | --- | --- | --- |
| 33 | --- | --- | --- | --- | 140.6 | -10.0 | --- | --- | --- | --- | --- | --- |
| 34 | 71.9 | -6.4 | --- | --- | --- | --- | 175.0 | -8.5 | 232.8 | -9.1 | --- | --- |
| 35 | 71.9 | -5.7 | --- | --- | 142.2 | -2.5 | --- | --- | 232.8 | -7.9 | --- | --- |
| 36 | 70.3 | -7.0 | --- | --- | 140.6 | -3.4 | --- | --- | --- | --- | --- | --- |
| 37 | 73.4 | -5.7 | --- | --- | --- | --- | 175.0 | -6.1 | 232.8 | -9.3 | --- | --- |
| 38 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 39 | 71.9 | -4.7 | --- | --- | 142.2 | -1.6 | --- | --- | 232.8 | -9.2 | --- | --- |
| 40 | --- | --- | --- | --- | --- | --- | 175.0 | -4.4 | 232.8 | -9.0 | --- | --- |
| 41 | 71.9 | -8.1 | --- | --- | 142.2 | -8.5 | --- | --- | --- | --- | --- | --- |
| 42 | 68.8 | -4.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 43 | --- | --- | 101.6 | -6.8 | --- | --- | --- | --- | --- | --- | --- | --- |
| 44 | 87.5 | -7.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 45 | 85.9 | 0.6 | --- | --- | 142.2 | -4.4 | --- | --- | 232.8 | -7.3 | --- | --- |
| 46 | 71.9 | -5.0 | --- | --- | --- | --- | 175.0 | -5.6 | 232.8 | -9.7 | --- | --- |
| 47 | 75.0 | -9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 48 | 71.9 | -8.2 | --- | --- | --- | - | --- | --- | --- | --- | --- | --- |
| 49 | 73.4 | -4.2 | --- | --- | --- | --- | 175.0 | -4.3 | 232.8 | -9.5 | --- | --- |
| 50 | 71.9 | -5.0 | --- | --- | --- | --- | 175.0 | -3.9 | 232.8 | -9.2 | --- | --- |
| 51 | 71.9 | -6.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 52 | 73.4 | -8.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 53 | 71.9 | -4.0 | --- | --- | --- | --- | 175.0 | -10.2 | --- | --- | --- | --- |
| 54 | 71.9 | -4.7 | --- | --- | --- | --- | --- | --- | --- | --- | 257.8 | -6.7 |
| 55 | 71.9 | -6.5 | --- | --- | 142.2 | -1.7 | --- | --- | --- | --- | --- | --- |
| 56 | --- | --- | --- | --- | --- | --- | --- | --- | 232.8 | -9.6 | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 72.8 | -5.2 | 115.2 | -14.9 | 142.3 | -7.2 | 175.0 | -8.9 | 232.8 | -11.6 | 257.8 | -15.9 |
| $\mathrm{L}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -3.2 |  | -12.9 |  | -5.1 |  | -6.9 |  | -9.5 |  | -13.8 |
| $\mathrm{K}_{\text {TN }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

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## BIN 11.5: Narrowband spectrum



BIN 11.5: Narrowband spectrum


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| BIN 12: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta f | $\mathrm{L}_{\text {pn,avg, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pt} \text {, , , }}$ | $\mathrm{L}_{\mathrm{pr}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\text {aj, }, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dLtil, 12: | 71.9 | 1.56 | 25.3 | 35.1 | 41.6 | -6.5 | -2.0 | -4.5 |
| dL ${ }_{\text {ti, } 2,12}$ : | 71.9 | 1.56 | 26.2 | 34.3 | 42.5 | -8.2 | -2.0 | -6.2 |
| $\mathrm{dL}_{\text {t1, 3, 12: }}$ | 70.3 | 1.56 | 23.4 | 35.2 | 39.7 | -4.5 | -2.0 | -2.5 |
| dLti,4,12: | 70.3 | 1.56 | 22.2 | 36.5 | 38.5 | -2.0 | -2.0 | 0.0 |
| $\mathrm{dL}_{\text {t1, } 6,12}$ : | 71.9 | 1.56 | 26.9 | 37.7 | 43.2 | -5.5 | -2.0 | -3.5 |
| dLti,8,12: | 73.4 | 1.56 | 26.5 | 34.1 | 42.8 | -8.8 | -2.0 | -6.8 |
| $\mathrm{dL}_{\mathrm{t} 1,9,12}$ : | 70.3 | 1.56 | 24.1 | 34.0 | 40.4 | -6.4 | -2.0 | -4.4 |
| dL ${ }_{\text {ti,10,12: }}$ | 71.9 | 1.56 | 24.6 | 36.9 | 40.9 | -4.0 | -2.0 | -2.0 |
| dL ${ }_{\text {t1,11,12: }}$ | 73.4 | 1.56 | 24.3 | 36.5 | 40.6 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\mathrm{t} 1,12,12}$ | 70.3 | 1.56 | 22.1 | 34.8 | 38.4 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\mathrm{t} 1,13,12}$ : | 71.9 | 1.56 | 23.8 | 39.3 | 40.1 | -0.8 | -2.0 | 1.2 |
| $\mathrm{dL}_{\mathrm{t} 1,14,12}$ | 70.3 | 1.56 | 24.9 | 33.5 | 41.2 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\mathrm{t} 1,15,12}$ | 76.6 | 1.56 | 26.5 | 34.5 | 42.8 | -8.3 | -2.0 | -6.3 |
| dL ${ }_{\text {t1,16,12: }}$ | 75.0 | 1.56 | 26.7 | 34.9 | 43.0 | -8.1 | -2.0 | -6.1 |
| $\mathrm{dL}_{\mathrm{t} 1,17,12}$ : | 75.0 | 1.56 | 26.6 | 37.7 | 42.9 | -5.3 | -2.0 | -3.3 |
| dL ${ }_{\text {ti,18,12: }}$ | 71.9 | 1.56 | 24.1 | 37.9 | 40.4 | -2.6 | -2.0 | -0.6 |
| $\mathrm{dL}_{\mathrm{t} 1,19,12}$ : | 71.9 | 1.56 | 24.2 | 35.5 | 40.5 | -4.9 | -2.0 | -2.9 |
| dLti,20,12: | 75.0 | 1.56 | 24.1 | 36.2 | 40.4 | -4.3 | -2.0 | -2.3 |
| dL ${ }_{\text {t1,21,12: }}$ | 71.9 | 1.56 | 24.9 | 38.6 | 41.2 | -2.6 | -2.0 | -0.6 |
| $\mathrm{dL}_{\mathrm{t} 1,22,12}$ : | 71.9 | 1.56 | 24.5 | 37.9 | 40.8 | -2.9 | -2.0 | -0.9 |
| dL ${ }_{\text {ti,23,12: }}$ | 71.9 | 1.56 | 25.3 | 36.0 | 41.6 | -5.6 | -2.0 | -3.6 |
| dL ${ }_{\text {t1,24,12: }}$ | 71.9 | 1.56 | 24.2 | 38.2 | 40.5 | -2.3 | -2.0 | -0.3 |
| $\mathrm{dL}_{\mathrm{t} 1,25,12}$ : | 73.4 | 1.56 | 24.5 | 35.5 | 40.8 | -5.3 | -2.0 | -3.3 |
| $\mathrm{dL}_{\mathrm{t} 1,26,12}$ | 71.9 | 1.56 | 22.9 | 34.5 | 39.2 | -4.7 | -2.0 | -2.7 |
| dL ${ }_{\text {t1,27,12: }}$ | 70.3 | 1.56 | 24.2 | 34.2 | 40.5 | -6.3 | -2.0 | -4.3 |
| dLti,29,12: | 71.9 | 1.56 | 23.9 | 39.2 | 40.2 | -1.0 | -2.0 | 1.0 |
| $\mathrm{dL}_{\mathrm{t} 1,30,12}$ | 70.3 | 1.56 | 22.6 | 37.1 | 38.9 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t} 1,31,12}$ : | 71.9 | 1.56 | 23.8 | 36.3 | 40.1 | -3.8 | -2.0 | -1.8 |
| $\mathrm{dL}_{\mathrm{t} 1,32,12}$ | 71.9 | 1.56 | 26.8 | 38.0 | 43.1 | -5.2 | -2.0 | -3.2 |
| dL ${ }_{\text {t1,33,12: }}$ | 73.4 | 1.56 | 25.9 | 37.4 | 42.2 | -4.8 | -2.0 | -2.8 |
| dL ${ }_{\text {t1,34,12: }}$ | 71.9 | 1.56 | 23.3 | 35.8 | 39.6 | -3.9 | -2.0 | -1.9 |
| $\mathrm{dL}_{\mathrm{t} 1,35,12}$ | 71.9 | 1.56 | 23.2 | 37.1 | 39.5 | -2.4 | -2.0 | -0.4 |
| dL ${ }_{\text {t2, }, 12}$ : | 140.6 | 1.56 | 26.8 | 41.8 | 43.1 | -1.3 | -2.0 | 0.7 |
| $\mathrm{dL}_{\text {L2,9,12: }}$ | 142.2 | 1.56 | 27.0 | 38.5 | 43.3 | -4.7 | -2.0 | -2.7 |
| $\mathrm{dL}_{\mathrm{t} 2,14,12}$ : | 139.1 | 1.56 | 27.7 | 39.7 | 44.0 | -4.3 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{t} 2,24,12}$ : | 143.8 | 1.56 | 27.6 | 42.8 | 43.9 | -1.1 | -2.0 | 0.9 |
| dL ${ }_{\text {t2, 26,12: }}$ | 142.2 | 1.56 | 25.9 | 42.3 | 42.2 | 0.1 | -2.0 | 2.1 |
| dLt $2,28,12$ : | 142.2 | 1.56 | 28.0 | 41.8 | 44.3 | -2.5 | -2.0 | -0.5 |
| dL ${ }_{\text {L2,32,12: }}$ | 143.8 | 1.56 | 28.7 | 40.3 | 45.0 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{\mathrm{t} 2,35,12}$ : | 143.8 | 1.56 | 27.2 | 44.4 | 43.5 | 0.9 | -2.0 | 2.9 |
| $\mathrm{dL}_{\text {L3,1,12: }}$ | 175.0 | 1.56 | 28.2 | 37.2 | 44.5 | -7.3 | -2.0 | -5.3 |
| dLt3,2,12: | 175.0 | 1.56 | 28.3 | 39.5 | 44.6 | -5.1 | -2.0 | -3.1 |
| dL ${ }_{\text {+ } 3,4,12:}$ | 175.0 | 1.56 | 26.6 | 38.3 | 42.9 | -4.6 | -2.0 | -2.6 |
| $\mathrm{dL}_{\text {L3,7,12: }}$ | 175.0 | 1.56 | 29.7 | 38.2 | 46.0 | -7.8 | -2.0 | -5.7 |
| $\mathrm{dL}_{\mathrm{t} 3,8,12}$ : | 175.0 | 1.56 | 28.8 | 36.6 | 45.1 | -8.5 | -2.0 | -6.5 |
| $\mathrm{dL}_{\mathrm{t}, 10,12}$ : | 175.0 | 1.56 | 27.4 | 35.9 | 43.7 | -7.8 | -2.0 | -5.7 |
| $\mathrm{dL}_{\mathrm{t} 3,11,12}$ : | 175.0 | 1.56 | 27.6 | 35.3 | 43.9 | -8.5 | -2.0 | -6.5 |
| dL ${ }_{\text {t } 3,12,12}{ }^{\text {d }}$ | 175.0 | 1.56 | 26.7 | 37.1 | 43.0 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\mathrm{t}, 13,12}$ : | 175.0 | 1.56 | 27.6 | 38.7 | 43.9 | -5.1 | -2.0 | -3.1 |
| $\mathrm{dL}_{\mathrm{t} 3,15,12}$ : | 175.0 | 1.56 | 28.2 | 35.9 | 44.5 | -8.6 | -2.0 | -6.6 |
| $\mathrm{dL}_{\mathrm{t}, 17,12}$ : | 175.0 | 1.56 | 29.1 | 37.8 | 45.4 | -7.6 | -2.0 | -5.6 |

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| $\mathrm{dL}_{\mathrm{t} 3,18,12}$ : | 175.0 | 1.56 | 28.6 | 41.1 | 44.9 | -3.8 | -2.0 | -1.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dL ${ }_{\text {t3,19,12: }}$ | 175.0 | 1.56 | 27.9 | 42.1 | 44.2 | -2.2 | -2.0 | -0.1 |
| $\mathrm{dL}_{\mathrm{t}, 2,2,12}$ : | 175.0 | 1.56 | 28.0 | 37.7 | 44.3 | -6.6 | -2.0 | -4.6 |
| dL ${ }_{\text {t3,21,12: }}$ | 175.0 | 1.56 | 27.8 | 40.4 | 44.1 | -3.7 | -2.0 | -1.7 |
| $\mathrm{dL}_{\mathrm{t}, 22,12}$ : | 175.0 | 1.56 | 28.3 | 42.2 | 44.6 | -2.3 | -2.0 | -0.3 |
| dL ${ }_{\text {t3,23,12: }}$ | 175.0 | 1.56 | 28.4 | 40.9 | 44.7 | -3.8 | -2.0 | -1.8 |
| dL ${ }_{\text {t3,27,12: }}$ | 175.0 | 1.56 | 27.5 | 38.8 | 43.8 | -5.0 | -2.0 | -3.0 |
| $\mathrm{dL}_{\mathrm{t}, 29,12}$ : | 175.0 | 1.56 | 27.5 | 39.2 | 43.8 | -4.6 | -2.0 | -2.6 |
| dL ${ }_{\text {t } 3,30,12:}$ | 175.0 | 1.56 | 26.9 | 39.2 | 43.2 | -4.0 | -2.0 | -2.0 |
| dL $\mathrm{d}_{\mathrm{t}, 31,12}$ : | 175.0 | 1.56 | 27.0 | 36.5 | 43.3 | -6.8 | -2.0 | -4.8 |
| $\mathrm{dL}_{\mathrm{t} 3,33,12}$ : | 175.0 | 1.56 | 29.3 | 40.6 | 45.6 | -5.0 | -2.0 | -2.9 |
| $\mathrm{dL}_{\mathrm{t} 3,34,12}$ : | 175.0 | 1.56 | 27.1 | 41.6 | 43.4 | -1.8 | -2.0 | 0.2 |
| $\mathrm{dL}_{44,1,12}$ : | 232.8 | 1.56 | 27.5 | 33.6 | 44.0 | -10.4 | -2.1 | -8.3 |
| dLt4,2,12: | 232.8 | 1.56 | 27.4 | 34.7 | 43.8 | -9.1 | -2.1 | -7.0 |
| dL ${ }_{\text {t4, }}$, 12: | 232.8 | 1.56 | 27.0 | 33.7 | 43.4 | -9.7 | -2.1 | -7.7 |
| $\mathrm{dL}_{\mathrm{t} 4,4,12}$ : | 232.8 | 1.56 | 26.4 | 34.4 | 42.8 | -8.4 | -2.1 | -6.4 |
| dL ${ }_{\text {t } 4,5,12:}$ | 232.8 | 1.56 | 27.8 | 36.2 | 44.2 | -8.0 | -2.1 | -6.0 |
| $\mathrm{dL}_{44,6,12}$ | 232.8 | 1.56 | 27.7 | 34.6 | 44.1 | -9.5 | -2.1 | -7.4 |
| dLta,7,12: | 232.8 | 1.56 | 28.3 | 35.7 | 44.7 | -9.0 | -2.1 | -6.9 |
| dL ${ }_{\text {t } 4,9,12:}$ | 232.8 | 1.56 | 26.9 | 34.9 | 43.4 | -8.4 | -2.1 | -6.4 |
| dLt4,12,12: | 232.8 | 1.56 | 26.4 | 33.4 | 42.9 | -9.5 | -2.1 | -7.4 |
| $\mathrm{dL}_{\mathrm{t} 4,15,12}$ : | 232.8 | 1.56 | 27.8 | 34.1 | 44.2 | -10.1 | -2.1 | -8.1 |
| $\mathrm{dL}_{\mathrm{t} 4,18,12}$ : | 232.8 | 1.56 | 27.6 | 34.3 | 44.0 | -9.8 | -2.1 | -7.7 |
| $\mathrm{dL}_{\mathrm{t} 4,20,12}$ : | 232.8 | 1.56 | 27.2 | 33.7 | 43.6 | -9.9 | -2.1 | -7.9 |
| $\mathrm{dL}_{\mathrm{t} 4,21,12}$ : | 232.8 | 1.56 | 27.6 | 34.1 | 44.0 | -9.9 | -2.1 | -7.8 |
| dLt4,22,12: | 232.8 | 1.56 | 27.7 | 34.0 | 44.2 | -10.2 | -2.1 | -8.1 |
| dLt4,25,12: | 232.8 | 1.56 | 26.4 | 33.6 | 42.8 | -9.2 | -2.1 | -7.1 |
| $\mathrm{dL}_{\mathrm{t} 4,26,12}$ : | 232.8 | 1.56 | 25.9 | 33.9 | 42.4 | -8.5 | -2.1 | -6.4 |
| $\mathrm{dL}_{\mathrm{t} 4,31,12}$ : | 232.8 | 1.56 | 26.8 | 33.6 | 43.2 | -9.6 | -2.1 | -7.5 |
| dL ${ }_{\text {t4,34,12: }}$ | 232.8 | 1.56 | 27.1 | 33.9 | 43.5 | -9.6 | -2.1 | -7.5 |
| dLt5,1,12: | 309.4 | 1.56 | 26.9 | 34.5 | 43.5 | -8.9 | -2.1 | -6.8 |
| dLt5,4,12: | 307.8 | 1.56 | 26.1 | 36.1 | 42.7 | -6.6 | -2.1 | -4.5 |
| dL ${ }_{\text {t5,24,12: }}$ | 325.0 | 1.56 | 26.6 | 39.0 | 43.2 | -4.1 | -2.1 | -2.0 |
| dL ${ }_{\text {t5,25,12: }}$ | 323.5 | 1.56 | 25.8 | 33.7 | 42.4 | -8.7 | -2.1 | -6.6 |
| $\mathrm{dL}_{\text {t5,26,12: }}$ | 325.0 | 1.56 | 25.3 | 33.3 | 41.8 | -8.5 | -2.1 | -6.3 |
| dL ${ }_{\text {t5,27,12: }}$ | 323.5 | 1.56 | 26.5 | 35.2 | 43.0 | -7.8 | -2.1 | -5.7 |
| dL ${ }_{\text {t5,32,12: }}$ | 325.0 | 1.56 | 26.5 | 34.0 | 43.1 | -9.1 | -2.1 | -7.0 |
| dLt6,5,12: | 7966.1 | 1.56 | -17.4 | -11.1 | 11.9 | -22.9 | -5.0 | -17.9 |
| dL t6,6,12: $^{\text {d }}$ | 8025.5 | 1.56 | -17.2 | -11.1 | 12.1 | -23.2 | -5.0 | -18.2 |
| $\mathrm{dL}_{\text {t } 6,9,12}$ : | 8061.4 | 1.56 | -17.7 | -11.5 | 11.7 | -23.1 | -5.0 | -18.1 |

BIN 12: Tonal components determined - Compact

| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j} \text { k }}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\mathrm{ta}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \#\# | [ Hz ] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |
| 1 | 71.9 | -6.5 | --- | --- | 175.0 | -7.3 | 232.8 | -10.4 | 309.4 | -8.9 | --- | --- |
| 2 | 71.9 | -8.2 | --- | --- | 175.0 | -5.1 | 232.8 | -9.1 | --- | --- | --- | --- |
| 3 | 70.3 | -4.5 | 140.6 | -1.3 | --- | --- | 232.8 | -9.7 | --- | --- | --- | --- |
| 4 | 70.3 | -2.0 | --- | --- | 175.0 | -4.6 | 232.8 | -8.4 | 307.8 | -6.6 | --- | --- |
| 5 | --- | --- | --- | --- | --- | --- | 232.8 | -8.0 | --- | --- | 7966.1 | -22.9 |
| 6 | 71.9 | -5.5 | --- | --- | --- | --- | 232.8 | -9.5 | --- | --- | 8025.5 | -23.2 |
| 7 | --- | --- | --- | --- | 175.0 | -7.8 | 232.8 | -9.0 | --- | --- | --- | --- |
| 8 | 73.4 | -8.8 | --- | --- | 175.0 | -8.5 | --- | --- | --- | --- | --- | --- |
| 9 | 70.3 | -6.4 | 142.2 | -4.7 | --- | --- | 232.8 | -8.4 | --- | --- | 8061.4 | -23.1 |
| 10 | 71.9 | -4.0 | --- | --- | 175.0 | -7.8 | --- | --- | --- | --- | --- | --- |

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| 11 | 73.4 | -4.0 | --- | --- | 175.0 | -8.5 | --- | --- | --- | --- | --- | --- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 70.3 | -3.5 | --- | --- | 175.0 | -6.0 | 232.8 | -9.5 | --- | --- | --- | --- |
| 13 | 71.9 | -0.8 | --- | --- | 175.0 | -5.1 | --- | --- | --- | --- | --- | --- |
| 14 | 70.3 | -7.6 | 139.1 | -4.3 | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 76.6 | -8.3 | --- | --- | 175.0 | -8.6 | 232.8 | -10.1 | --- | --- | --- | --- |
| 16 | 75.0 | -8.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 75.0 | -5.3 | --- | --- | 175.0 | -7.6 | --- | --- | --- | --- | --- | --- |
| 18 | 71.9 | -2.6 | --- | --- | 175.0 | -3.8 | 232.8 | -9.8 | --- | --- | --- | --- |
| 19 | 71.9 | -4.9 | --- | --- | 175.0 | -2.2 | --- | --- | --- | --- | --- | --- |
| 20 | 75.0 | -4.3 | --- | --- | 175.0 | -6.6 | 232.8 | -9.9 | --- | --- | --- | --- |
| 21 | 71.9 | -2.6 | --- | --- | 175.0 | -3.7 | 232.8 | -9.9 | --- | --- | --- | --- |
| 22 | 71.9 | -2.9 | --- | --- | 175.0 | -2.3 | 232.8 | -10.2 | --- | --- | --- | --- |
| 23 | 71.9 | -5.6 | --- | --- | 175.0 | -3.8 | --- | --- | --- | --- | --- | --- |
| 24 | 71.9 | -2.3 | 143.8 | -1.1 | --- | --- | --- | --- | 325.0 | -4.1 | --- | --- |
| 25 | 73.4 | -5.3 | -- | --- | --- | --- | 232.8 | -9.2 | 323.5 | -8.7 | --- | --- |
| 26 | 71.9 | -4.7 | 142.2 | 0.1 | --- | --- | 232.8 | -8.5 | 325.0 | -8.5 | --- | --- |
| 27 | 70.3 | -6.3 | --- | --- | 175.0 | -5.0 | --- | --- | 323.5 | -7.8 | --- | --- |
| 28 | --- | --- | 142.2 | -2.5 | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 71.9 | -1.0 | --- | --- | 175.0 | -4.6 | --- | --- | --- | --- | --- | --- |
| 30 | 70.3 | -1.8 | --- | --- | 175.0 | -4.0 | --- | --- | --- | --- | --- | --- |
| 31 | 71.9 | -3.8 | --- | --- | 175.0 | -6.8 | 232.8 | -9.6 | --- | --- | --- | --- |
| 32 | 71.9 | -5.2 | 143.8 | -4.6 | --- | --- | --- | --- | 325.0 | -9.1 | --- | --- |
| 33 | 73.4 | -4.8 | --- | --- | 175.0 | -5.0 | --- | --- | --- | --- | --- | --- |
| 34 | 71.9 | -3.9 | --- | --- | 175.0 | -1.8 | 232.8 | -9.6 | --- | --- | --- | --- |
| 35 | 71.9 | -2.4 | 143.8 | 0.9 | --- | --- | --- | --- | --- | --- | --- | --- |
| 36 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 72.1 | -4.6 | 141.0 | -7.8 | 175.0 | -6.8 | 232.8 | -11.6 | 311.4 | -12.7 | 7970.4 | -27.8 |
| $\mathrm{L}_{\text {a }}$ [dB] |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |  | -5.0 |
| dLa, ${ }_{\text {, }}$ [dB] |  | -2.6 |  | -5.7 |  | -4.8 |  | -9.5 |  | -10.6 |  | -22.7 |
| $\mathrm{K}_{\text {ts }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |

## BIN 12: Narrowband spectrum



BIN 12: Narrowband spectrum


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| BIN 12.5: Tonal components determined |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Frequency | delta $f$ | $\mathrm{L}_{\mathrm{pn}, \mathrm{avg}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pt}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{pr}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{L}_{\mathrm{a}}$ | $\mathrm{dL}_{\text {aj, }, \mathrm{k}}$ |
|  | [Hz] | [Hz] | [dB] | [dB] | [dB] | [dB] | [dB] | [dB] |
| dL $\mathrm{t}_{1,1,12,5}$ | 175.0 | 1.56 | 29.9 | 36.3 | 46.2 | -9.8 | -2.0 | -7.8 |
| $\mathrm{dL}_{\mathrm{t} 1,4,12,5}$ | 175.0 | 1.56 | 28.5 | 38.5 | 44.8 | -6.3 | -2.0 | -4.2 |
| $\mathrm{dL}_{\text {t1, 5,12.5: }}$ | 175.0 | 1.56 | 28.2 | 39.1 | 44.5 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t} 1,6,12,5}$ | 175.0 | 1.56 | 28.1 | 41.1 | 44.4 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\mathrm{t} 1,7,12,5}$ | 175.0 | 1.56 | 25.9 | 38.9 | 42.2 | -3.3 | -2.0 | -1.3 |
| d $\mathrm{L}_{11,8,12,5}$ | 175.0 | 1.56 | 27.4 | 37.7 | 43.7 | -6.0 | -2.0 | -3.9 |
| $\mathrm{dL}_{\mathrm{t} 1,9,12,5}$ | 175.0 | 1.56 | 28.0 | 37.1 | 44.3 | -7.3 | -2.0 | -5.2 |
| $\mathrm{dL}_{\text {t1,11,12,5: }}$ | 175.0 | 1.56 | 25.8 | 35.5 | 42.1 | -6.6 | -2.0 | -4.6 |
| $\mathrm{dL}_{\text {t1,12,12,5: }}$ | 175.0 | 1.56 | 27.5 | 37.8 | 43.8 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\mathrm{t}_{1}, 13,12.5}$ | 175.0 | 1.56 | 28.1 | 41.4 | 44.4 | -3.0 | -2.0 | -1.0 |
| $\mathrm{dL}_{\text {t1,15,12.5: }}$ | 175.0 | 1.56 | 27.7 | 40.5 | 44.0 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\mathrm{t}, 11,12,5}$ | 175.0 | 1.56 | 27.9 | 40.2 | 44.2 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\text {t1,18,12,5: }}$ | 175.0 | 1.56 | 27.5 | 41.9 | 43.8 | -1.9 | -2.0 | 0.2 |
| $\mathrm{dL}_{\mathrm{t}, 21,12,5}$ | 175.0 | 1.56 | 28.5 | 37.2 | 44.8 | -7.6 | -2.0 | -5.6 |
| $\mathrm{dL}_{\text {t1,22,12.5: }}$ | 175.0 | 1.56 | 27.4 | 34.4 | 43.7 | -9.3 | -2.0 | -7.3 |
| dLti,23,12.5: | 175.0 | 1.56 | 27.8 | 37.5 | 44.1 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{\mathrm{t} 2,2,12,5}$ : | 143.8 | 1.56 | 28.8 | 42.3 | 45.1 | -2.8 | -2.0 | -0.8 |
| dL $\mathrm{L}_{\mathrm{t} 2,3,12,5:}$ | 143.8 | 1.56 | 27.2 | 39.2 | 43.5 | -4.4 | -2.0 | -2.3 |
| $\mathrm{dL}_{\mathrm{t}_{2,14,12.5}}$ | 143.8 | 1.56 | 28.1 | 44.1 | 44.4 | -0.3 | -2.0 | 1.7 |
| $\mathrm{dL}_{\mathrm{t} 2,19,12,5}$ | 142.2 | 1.56 | 27.0 | 41.6 | 43.3 | -1.7 | -2.0 | 0.3 |
| $\mathrm{dL}_{\text {L2, 20,12.5: }}$ | 140.6 | 1.56 | 27.8 | 40.9 | 44.1 | -3.1 | -2.0 | -1.1 |
| dL $\mathrm{L}_{\mathrm{t}, 1,12,5}$ | 175.0 | 1.56 | 29.9 | 36.3 | 46.2 | -9.8 | -2.0 | -7.8 |
| dL $\mathrm{L}_{\text {t, 4, 12,5: }}$ | 175.0 | 1.56 | 28.5 | 38.5 | 44.8 | -6.3 | -2.0 | -4.2 |
| dL ${ }_{\text {t } 3,5,12.5}$ : | 175.0 | 1.56 | 28.2 | 39.1 | 44.5 | -5.4 | -2.0 | -3.4 |
| $\mathrm{dL}_{\mathrm{t} 3,6,12.5}$ : | 175.0 | 1.56 | 28.1 | 41.1 | 44.4 | -3.3 | -2.0 | -1.3 |
| $\mathrm{dL}_{\mathrm{t3}, 7,12.5}$ : | 175.0 | 1.56 | 25.9 | 38.9 | 42.2 | -3.3 | -2.0 | -1.3 |
| dL ${ }_{\text {t3, }, 12,5}{ }^{\text {a }}$ | 175.0 | 1.56 | 27.4 | 37.7 | 43.7 | -6.0 | -2.0 | -3.9 |
| dL ${ }_{\text {t }}$,9,12.5: | 175.0 | 1.56 | 28.0 | 37.1 | 44.3 | -7.3 | -2.0 | -5.2 |
| dLti3,11,12.5: | 175.0 | 1.56 | 25.8 | 35.5 | 42.1 | -6.6 | -2.0 | -4.6 |
| $\mathrm{dL}_{\text {t3,12,12,5: }}$ | 175.0 | 1.56 | 27.5 | 37.8 | 43.8 | -6.0 | -2.0 | -4.0 |
| $\mathrm{dL}_{\text {t3,13,12,5: }}$ | 175.0 | 1.56 | 28.1 | 41.4 | 44.4 | -3.0 | -2.0 | -1.0 |
| $\mathrm{dL}_{\text {t3,15,12.5: }}$ | 175.0 | 1.56 | 27.7 | 40.5 | 44.0 | -3.5 | -2.0 | -1.5 |
| $\mathrm{dL}_{\text {t3,16,12.5: }}$ | 175.0 | 1.56 | 27.9 | 40.2 | 44.2 | -4.0 | -2.0 | -2.0 |
| $\mathrm{dL}_{\text {t3,18,12.5: }}$ | 175.0 | 1.56 | 27.5 | 41.9 | 43.8 | -1.9 | -2.0 | 0.2 |
| dL ${ }_{\text {3 } 3,21,12.5}$ | 175.0 | 1.56 | 28.5 | 37.2 | 44.8 | -7.6 | -2.0 | -5.6 |
| dL ${ }_{\text {+3,22,12.5: }}$ | 175.0 | 1.56 | 27.4 | 34.4 | 43.7 | -9.3 | -2.0 | -7.3 |
| dL ${ }_{\text {ti, 23,12.5: }}$ | 175.0 | 1.56 | 27.8 | 37.5 | 44.1 | -6.5 | -2.0 | -4.5 |
| $\mathrm{dL}_{44,5,12,5}$ | 232.8 | 1.56 | 27.8 | 36.4 | 44.3 | -7.9 | -2.1 | -5.8 |
| dL ${ }_{\text {t4, } 6,12.5}$ : | 232.8 | 1.56 | 27.7 | 35.3 | 44.1 | -8.8 | -2.1 | -6.8 |
| dLti, ${ }^{\text {d,12.5: }}$ | 232.8 | 1.56 | 26.2 | 32.5 | 42.7 | -10.1 | -2.1 | -8.1 |
| dL $\mathrm{L}_{4}, 8,12.5$ : | 232.8 | 1.56 | 26.8 | 35.3 | 43.2 | -7.9 | -2.1 | -5.8 |
| $\mathrm{dL}_{\text {t4,12,12.5: }}$ | 232.8 | 1.56 | 27.2 | 34.6 | 43.6 | -9.0 | -2.1 | -6.9 |
| $\mathrm{dL}_{44,13,12.5}$ | 232.8 | 1.56 | 27.6 | 33.9 | 44.0 | -10.1 | -2.1 | -8.0 |
| $\mathrm{dL}_{44,14,12.5}$ | 232.8 | 1.56 | 28.4 | 35.5 | 44.8 | -9.3 | -2.1 | -7.2 |
| dLt4,15,12.5: | 232.8 | 1.56 | 27.6 | 35.4 | 44.0 | -8.6 | -2.1 | -6.6 |
| $\mathrm{dL}_{44,17,12.5}$ | 232.8 | 1.56 | 27.6 | 35.1 | 44.1 | -8.9 | -2.1 | -6.9 |
| $\mathrm{dL}_{44,18,12.5}$ | 232.8 | 1.56 | 27.8 | 35.7 | 44.2 | -8.5 | -2.1 | -6.4 |
| dLta, 19,12.5: | 232.8 | 1.56 | 26.6 | 33.4 | 43.0 | -9.7 | -2.1 | -7.6 |
| dL ${ }_{\text {t4,20,12.5: }}$ | 232.8 | 1.56 | 27.4 | 33.7 | 43.8 | -10.1 | -2.1 | -8.1 |
| dLti4,22,12.5: | 232.8 | 1.56 | 27.4 | 35.2 | 43.8 | -8.6 | -2.1 | -6.5 |
| dL ${ }_{\text {t5,2,12,5: }}$ | 309.4 | 1.56 | 26.7 | 35.8 | 43.3 | -7.5 | -2.1 | -5.3 |

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| $\mathrm{dL}_{t 5,3,12.5:}$ | 307.8 | 1.56 | 26.5 | 35.6 | 43.0 | -7.4 | -2.1 | -5.3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{dL}_{t 5,4,12.5:}$ | 309.4 | 1.56 | 27.0 | 35.1 | 43.6 | -8.5 | -2.1 | -6.4 |
| $\mathrm{dL}_{t 5,6,12.5:}$ | 309.4 | 1.56 | 26.8 | 34.5 | 43.4 | -8.9 | -2.1 | -6.8 |
| $\mathrm{dL}_{t 5,7,12.5:}$ | 309.4 | 1.56 | 25.8 | 33.2 | 42.4 | -9.2 | -2.1 |  |
| $\mathrm{dL}_{t 5,8,12.5:}$ | 309.4 | 1.56 | 26.1 | 33.6 | 42.6 | -9.0 | -2.1 | -7.0 |


| BIN 12.5: Tonal components determined-Compact |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Spectrum | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\mathrm{ta}, \mathrm{j}, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\text {T }}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathbf{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ | $\mathrm{f}_{\mathrm{T}}$ | $\mathrm{dL}_{\text {tn, }, \mathrm{k}}$ |  |
| \#\# | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] | [Hz] | [dB] |  |
| 1 | --- | --- | --- | --- | 175.0 | -9.8 | --- | --- | --- | --- |  |
| 2 | 71.9 | -5.4 | 143.8 | -2.8 | --- | --- | --- | --- | 309.4 | -7.5 |  |
| 3 | 71.9 | -3.9 | 143.8 | -4.4 | --- | --- | --- | --- | 307.8 | -7.4 |  |
| 4 | 76.6 | -6.7 | --- | --- | 175.0 | -6.3 | --- | --- | 309.4 | -8.5 |  |
| 5 | 73.4 | -4.9 | --- | --- | 175.0 | -5.4 | 232.8 | -7.9 | --- | --- |  |
| 6 | 71.9 | -2.8 | --- | --- | 175.0 | -3.3 | 232.8 | -8.8 | 309.4 | -8.9 |  |
| 7 | 71.9 | 0.7 | --- | --- | 175.0 | -3.3 | 232.8 | -10.1 | 309.4 | -9.2 |  |
| 8 | 71.9 | -3.4 | --- | --- | 175.0 | -6.0 | 232.8 | -7.9 | 309.4 | -9.0 |  |
| 9 | 71.9 | -4.4 | --- | --- | 175.0 | -7.3 | --- | --- | --- | --- |  |
| 10 | 73.4 | -4.4 | --- | --- | --- | --- | --- | --- | --- | --- |  |
| 11 | 71.9 | 1.1 | --- | --- | 175.0 | -6.6 | --- | --- | --- | --- |  |
| 12 | 73.4 | -4.2 | --- | --- | 175.0 | -6.0 | 232.8 | -9.0 | --- | --- |  |
| 13 | 73.4 | -4.1 | --- | --- | 175.0 | -3.0 | 232.8 | -10.1 | --- | --- |  |
| 14 | 71.9 | -0.5 | 143.8 | -0.3 | --- | --- | 232.8 | -9.3 | --- | --- |  |
| 15 | 71.9 | -1.5 | --- | --- | 175.0 | -3.5 | 232.8 | -8.6 | --- | --- |  |
| 16 | 71.9 | -2.5 | --- | --- | 175.0 | -4.0 | --- | --- | --- | --- |  |
| 17 | 78.1 | -5.7 | --- | --- | --- | --- | 232.8 | -8.9 | --- | --- |  |
| 18 | 71.9 | -1.6 | --- | --- | 175.0 | -1.9 | 232.8 | -8.5 | --- | --- |  |
| 19 | 73.4 | -4.7 | 142.2 | -1.7 | --- | --- | 232.8 | -9.7 | --- | --- |  |
| 20 | 70.3 | -8.5 | 140.6 | -3.1 | --- | --- | 232.8 | -10.1 | --- | --- |  |
| 21 | 73.4 | -7.0 | --- | --- | 175.0 | -7.6 | --- | --- | --- | --- |  |
| 22 | 71.9 | -2.1 | --- | --- | 175.0 | -9.3 | 232.8 | -8.6 | --- | --- |  |
| 23 | 71.9 | -0.7 | --- | --- | 175.0 | -6.5 | --- | --- | --- | --- |  |
| $\mathrm{f}_{\mathrm{t}}[\mathrm{Hz}] \mid \mathrm{dL}_{\mathrm{k}}[\mathrm{dB}]$ | 72.7 | -3.0 | 143.6 | -8.3 | 175.0 | -6.5 | 232.8 | -10.9 | 309.3 | -12.7 |  |
| $\mathrm{L}_{\mathrm{a}}[\mathrm{dB}]$ |  | -2.0 |  | -2.0 |  | -2.0 |  | -2.1 |  | -2.1 |  |
| $\mathrm{dL}_{\mathrm{a}, \mathrm{k}}[\mathrm{dB}]$ |  | -1.0 |  | -6.3 |  | -4.5 |  | -8.8 |  | -10.5 |  |
| $\mathrm{K}_{\text {tn }}$ [dB] |  | 0 |  | 0 |  | 0 |  | 0 |  | 0 |  |

## BIN 12.5: Narrowband spectrum



BIN 12.5: Narrowband spectrum




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